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An Experimental Study of the Relation between Perception of Self and Evaluation of Another

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AN EXPERIMENTAL STUDY OF THE RELATION
BETWEEN PERCEPTION OF SELF AND
EVALUATION OF ANOTHER

by

Henry J. Lambin

A Dissertation Submitted to the Faculty of the Graduate School
of Loyola University in Partial Fulfillment of
the Requirements for the Degree of
Doctor of Philosophy

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LIFE

Henry Joseph Lambin was born in Chicago, Illinois on June 10, 1921. He graduated from Loyola Academy, Chicago, Illinois in June, 1940. From September, 1940 to March, 1943 he attended Loyola University, Chicago, Illinois. He left college in March, 1943 to serve as an Aerial Navigator with the Air Force. After separation from service in November, 1945 he returned to Loyola and received his Bachelor of Arts Degree in February, 1947.

The writer began his graduate studies at Loyola in the same month. He also took courses at Northwestern and the University of Chicago. In June, 1953 he received his Master of Arts Degree from Loyola.

While engaged in graduate studies he taught as a Lecturer in Psychology at Loyola since 1949 and at the Stritch School of Medicine during 1953 and 1954. From June of 1950 to October of 1955 he was employed as Psychologist on the staff of the Behavior Clinic of the Criminal Court of Cook County. During 1955 and 1956 he was one of the partners of Advisors in Management, a psychological consulting firm.

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CHAPTER I

INTRODUCTION

Who can be sure, in his sensible perception of a chair, how much comes from the eye, and how much is supplied out of previous knowledge of the mind?

This brief statement of William James (111, p. 191) summarizes one of the crucial problems in the process of perception. It was a problem sixty years ago, it is a problem today, and is likely to remain one for some time in the future. The reason, of course, is obvious. We are conscious of the results of perception, the chair, and not the process through which we become aware of the chair. Furthermore, in attempting to resolve this problem by introspection, the process studied, perception, is itself used in the analysis. The person observing is still the person observed.

In Plato's (155, Bk. VII) analogy of the cave the prisoners could see nothing but the shadows cast on the wall. They did not know, nor could they be expected to know, that the shadows on the wall were merely illusions and were not real. Only when released from their chains could they realize that the shadows were representations of objects passing before the fire, and their previous perceptions were erroneous.

To continue the analogy, our state of awareness is equivalent to that of the prisoners. While no one exploring this problem may expect a literal freedom from his chains so as to attain the privileged perspective of

observing directly the difference between his sense perceptions and the objects giving rise to them, he may nevertheless approximate this state by comparing his perceptions of an object with those of another observer. Furthermore, if the object perceived is another person, the individual observed may offer his perceptions of himself to serve as a basis of comparison.

Perception and/or evaluation of another is a crucial issue in psychology. Whether the investigator directly or implicitly regards psychology as a study of consciousness, behavior, perception, motivation, the unconscious, or the whole man, all of these subject matters have something in common; namely, observation and/or introspection, evaluation, and description. Furthermore, according to Allport (8, p. 159, footnote) the subject matter ultimately must be referred to the conscious state of the observer.

1. It is nowadays fashionable to distrust the evidence of immediate experience . . . (yet) . . . the core of the objective method is still the reliance each scientist places upon the testimony of his own fugative and overlapping conscious states . . . and what is more important, his acceptance and rejection of evidence, his devotion to his own standards, are bound to the still more subjective core of his personality, viz., his self-consciousness. (*italics mine*)

Consequently, not only what is observed, but the way it is observed, evaluated, and described by the observer cannot be considered independently of the scientist's own mental state. Would not the biography of Jones (113) suggest that Freud's theory of personality dynamics evolved in some way out of the dynamics of his own personality?

Obviously, the mental state of the observer is less intimately involved in some observations and evaluations than in others. It is one thing to report that a man is six feet tall, speaks rapidly, bites his nails, and it

is something else to affirm that he is rigid, authoritarian, prejudiced, since none of the latter qualities can be observed directly in his behavior. Yet we probably all have impressions and opinions such as these of other people. Some of these impressions are verbalized, others verbalizable. Another group is held implicitly, whose influence on our behavior might be equally significant. Consequently, the process by which we establish these judgments and opinions and their validity is of no small importance in psychology.

Several investigators have found extensive significances in the problems intra and interpersonal perception. Rogers (159, Ch. XI) uses perception as a focal point in describing personal adjustment and maladjustment. He sees the psychotic, for example, as a person with a rigid perceptual pattern, whose self is built up by distorted perceptions of the world about him. In addition, he regards progress in therapy in terms of perceptual change in the patient. Finally, the studies of Fiedler (69) illustrate that the process of inter and intrapersonal perception differentiate effective from ineffective small groups engaged in some specific task. The value of this type of study has been demonstrated in terms of the performances of athletic teams, military combat crews, and industrial groups.

In brief, this study will endeavor to investigate the intra and interpersonal processes of perception, evaluation, and description with principal emphasis on how perception of self is related to evaluation of another. A review of the literature follows.

CHAPTER II

REVIEW OF THE LITERATURE

The general purpose of this dissertation is to advance and test specific hypotheses on the way we know and understand other people and incidentally ourselves as well. The relevant literature, remote and immediately related, is extensive and the limits of the field are by no means clearly circumscribed.

In gaining knowledge of other people several factors might be distinguished: (1) the Judge (the observer); (2) the Subject (the one observed); (3) the Relation between Judge and Subject (are they strangers, friends, antagonists); (4) Intake (what is observed); (5) Integration (how Intake is fused with previous experience); (6) Output (the description of the Subject); (7) Evaluation (methods of evaluating and testing the data). Some of these terms are taken from Gage (82) and slightly modified.

First, a general outline is presented. This sketches the framework around which the review of the literature is integrated. Second, the studies are reviewed. A summary is presented on each topic if pertinent. Third, an over-all summary is made as to what conclusions are relatively certain, probable, and left uncertain.

Before going to the outline, a comment is offered about the focal point around which much of the literature to be quoted centers. The general

emphasis is on the characteristics, situation, activity, descriptions, and evaluations of the good judge of others, in contrast to the poor judge of others. This approach is useful in centering the concepts around a single criterion. However, the problems of whether or not this is a satisfactory criterion are not easily resolved for this reason. We might well assume that people are what they are. But there is some question which type of knowledge more closely approximates this real reality. Is it the Subject's perception of himself, the way he is seen by his friends, or the way he is diagnosed by experts? Presumably experts. However, it seems possible that the experts might perceive the Subject in such a way that his description is intelligible only to the diagnostician's colleagues. But would the expert be describing the Subject's perceptions as experienced by the Subject himself?

Consequently, in the literature the good and poor judges of others, accurate and inaccurate judgments are frequently mentioned. Later, the writer will attempt to describe in what manner the Judge perceives the Subject, with less emphasis on accuracy and error than on similarities with other Judges and with the Subject's perception of himself. The review of the literature is organized around the following outline.

OUTLINE

A. Judge. Characteristics of the good Judge of others.

1. Biographical data

- a. Age
- b. Sex
- c. Family background
- d. Education and training
- e. Social relations

2. Test data

- a. Intelligence
- b. Special abilities
- c. Social attitudes
- d. Emotional characteristics
- e. Insight and adjustment

3. Conclusion

B. Subject. Characteristics of the Subject which make him easy to judge.

(Same as above when pertinent).

C. Relations between the Judge and Subject which influence accuracy of judgment.

- 1. Acquaintance
- 2. Like and dislike
- 3. Similarity and difference

D. Intake. Methods of observation yielding more accurate description of the Subject.

1. Personal

a. Life situation

b. Interview

2. Impersonal

a. Sound movie

b. Descriptive essay

c. Projective tests

d. Objective tests

e. Photographs

E. Integration. Fusion of Intake data with previous experience.

1. Self-knowledge

2. Knowledge of others

a. Inference

b. Empathy

c. Intuition

d. Perception of particular traits in others

F. Output. The Judge's description of the Subject.

1. Essays

2. Objective psychological tests and ranking scales

3. Q sorts

G. Evaluation. Analysis of the methods for objectively evaluating and testing data.

1. Q technique and Q sorts
2. Absolute rating scales
3. Intermediary keys

H. Summary.

Survey of the Literature

A. Judge. Characteristics of the good Judge of others.

1. Biographical data. This group of characteristics would constitute relatively objective, factual information of the case history variety.

- a. Age.

In an early study G. Allport (8) observes that the good Judge of others will be over thirty years of age. Sufficient experience and maturity are not to be expected in younger people.

Using the Ruckmick pictures Gage (81) found an increase from ages three to fourteen in ability to judge intended emotional expressions.

Walton (203) obtained somewhat similar results using various tests of empathy and emotional expression over a wide range of subjects extending from pre-school to college age.

Dymond, Hughes and Raabe (57) found a marked increase in empathy in children between ages seven and eleven. However, from ages eighteen to late thirty this ability does not increase, according to several studies performed by Chowdry and Newcomb.

It must be noted that accuracy of prediction is frequently accompanied by similarity of personality of subject and judge. In the studies cited above, the younger judges were more like their subjects than were the older judges. As will be noted later,

similarity of Judge and Subject is frequently related to accuracy of judgment.

b. Sex.

G. Allport (8) observed that women are generally slightly superior to men in judging others, but attributes this to several social factors: social dependency, personalization, interests peculiar to their sex, and the nature of their emphasis on interpersonal relations.

Jenness (112) claimed his data pointed to a significant superiority of women in judging the Rudolph Poses, but not in judging emotions from other photographs, models, or movies.

On the other hand, no difference was found by F. Allport (5), Coleman (45), Fernberger (66), Gates (94), and Guilford (98). A slight and questionable significant difference was found in favor of women by Buzby (36), Fields (73), and Kellogg (118). Only Kanner (116) found men slightly superior.

While the initial differences were not significant, Dymond (55) found that women judges were significantly superior to the males in making similar judgments six weeks later. While the judges were well acquainted with the subjects, a simple level of acquaintance was found by Norcutt and Silva (148) in which husbands and wives rated each other. In the performance of these tasks men were not found significantly superior.

Significant differences both in rating subjects and predicting

the subject's responses were not found by McClelland (135), Polansky (156), Travers (196), Valentine (198).

Cline (43) used 316 judges to evaluate college students appearing in a sound movie. He found women consistently higher than men in accuracy.

Conclusions. There is some weak but conflicting evidence for female superiority. However, the factors contributing to judgmental accuracy in men are different from those in women.

c. Family background.

Sweet (185) found a positive correlation between socio-economic status and ability to judge others. His results must be regarded as inconclusive because they could have been due to intelligence.

Taft (186), on the contrary, found no correlation between graduate students' ability to judge others and socio-economic status. However, he found that the best judges were from one child families. Judges from a rural setting were less accurate than those from urban environments. Furthermore, as a group, Negroes were poor in judgmental ability, while Jews were superior. Taft attributed the higher accuracy of the latter to increased motivation arising from their out-group feeling. As a consequence, they experience a need to observe their associates carefully in order to gain acceptance and function harmoniously with them. In contrast, he believed the Negroes were too isolated and dissimilar in back-

ground to judge with accuracy members of other groups.

Conclusions. There is no conclusive evidence of a ratio between family background and ability to judge.

d. Education and training.

Concerning training in psychology, the studies present some conflicting conclusions. In judging emotional expression in the Boring-Titchener models Buzby (36) found that students who had completed at least one course in psychology were less accurate than students taking their first course.

Hanks (100) found no relation between training and ability to predict inventory questions. However, Polansky (156) found graduate students better judges than those without psychology training. Murray (146) noted that judges who worked on his project for two years judged more accurately during the second year.

Estes (63) studied the effects of a personal psychoanalysis on judgment of others. On the basis of the thirty-seven judges studied he found that being psychoanalyzed neither helped nor hindered judgments made of others.

Usually non-professional judges are better in prediction than professional psychologists. Estes' (63) study disclosed this, as did Wedell and Smith (209). Murray (146) seeks to explain this in part as a function of training. He observed that the intuitive ability necessary to judge others is not developed in the training of scientists, but in writers. The former, he believed, are

trained to analyze, dissect, and repress emotions, and thereby lose the essential feature of the very thing they are expected to judge.

In contrast to Murray's criticism of training in scientists as detrimental to personal judgement, Luft (128) found physical scientists superior to clinicians in psychology, psychiatry and social work, as well as graduate students in both psychology and the physical sciences. But Taft (183) found psychologists to be superior to graduate students in various other disciplines. However, the psychologists in Luft's study were clinicians, those in Taft's study, experimentalists. Soskin (175) found practicing clinical psychologists no better than graduate students in predicting inventory responses from projective test data.

Concerning degree of training in psychology, Kelly and Fiske (119) found advanced graduate students in clinical psychology no more accurate in judging responses of patients than students with only one year of training. Furthermore, students were able to use test and personal data as effectively as were the experts in making predictions about the potential for future success of the students. However, the student judges had the advantage of similarity to the subjects, and of being previously evaluated themselves.

In addition, Rabin (157) found professional psychologists superior to students in identifying the pathological types represented in the Szondi pictures. In part this superiority is also found by Luft (125) and could be attributed to the greater tech-

nical knowledge and familiarity with test techniques in diagnostic categories.

Cline (43) found considerable differences in ability to judge others among persons with varied acquaintance with psychology. Experienced professional psychologists predicted verbal behavior well, but life behavior poorly, while the opposite was true for the novices in the field. Watson (205) concluded that the nature of the psychologist's work tends to take him away from the life situation of the people with whom he works except in an artificial way.

Stern et al (179) compared the ratings made by four elementary school teachers and five psychologists on six seventh grade pupils before and after the judges conferred with each other. Initially the teachers tended to view the pupils in a stereotyped manner which resembled their own stereotypes of the ideal student. However, each successive Q sort brought their evaluation closer to a uniform pattern. The teachers ratings tended to approach those of the psychologists after conferring with the psychologists in a group setting.

Conclusions. These findings present a type of situation that is likely to be found throughout much of the literature in this field. The conflicts stem from the various indirect factors operative in these studies. In general, it might be said that probably little is gained from pure, academic, classroom psychology.

However, those working in the field and those exposed to conferences and clinical work tend to improve with training. However, in this area of interpersonal perception, greater judgmental accuracy cannot be considered independently of the criterion for accurate judgment.

The experienced psychologist becomes more and more apt in handling the same concepts which are used in any objective evaluative device. The scientists and experimentalists are able to compensate for their lack of intuitive skill in judging others by looking at people as things and evaluating them according to rigid objective criteria.

e. Social relations.

It seems probable that one who understands others well is able to turn this knowledge into social skill and deal with others more effectively. However, evidence to the contrary is presented in the following studies:

Moreno (141) demonstrated that those children who are able to perceive social roles accurately were not necessarily those who could act them out with high facility.

Yet Vernon (200) found that the ability to judge strangers is related positively to scores on the Social Situation Test and the Memory for Names and Faces subtests of the George Washington Test of Social Intelligence, and negatively to scores on the Observation of Human Behavior subtest.

The OSS Assessment Group (153) scores on a test of verbal

description of peers correlates so low with staff rating of candidates on Social Relations that it was not used.

Taft (186) found the good judges of others in the role playing test were rated significantly lower on "ingenuity" than were the poor ones. There was no difference between good and poor judges on the ratings made by the assessment staff on "persuasiveness" in discussion, nor on "likeability" as defined by peers, as sociometric choices. This holds for both inferential and perceptual judgments.

In the Clinical Psychology Assessment Program, Norman (147) found a curvilinear rather than a direct positive relation between social acceptability and ability to judge others. In part he attributes this relation to the nature of his sample. He believes that his group is above average in adjustment and consequently above average in acceptability. Therefore, although accuracy of judgment tends to increase with social acceptability, the latter tended to level out and thereby produce a curvilinear relation.

Numerous other studies, including those by Chowdry and Newcomb (42), Van Zelt (199), Speroff (177), and Dymond (56) reported a positive relation between social acceptability and ability to judge others, particularly members of their own group. This relation holds for salesmen, executives, discussion leaders, co-workers.

However, Gage (75) failed to find positive relations between Naval leadership and acceptability.

Conclusions. Studies generally confirm a positive relation

between social acceptability, leadership, popularity, and ability to judge group members. The more accurate judges are those who are more readily understood and accepted by others.

2. Test data. Information from objective and projective tests and rating scales is included.

- a. Intelligence.

Estes (63) maintained that intelligence is a must for accurate judgment of others. G. W. Allport (8) summarized the literature to 1937 on personal judgment. He finds some relation between accuracy of judgment and high intelligence. He speaks particularly of social intelligence; the ability to make quick judgments in behavioral matters rather than in conceptual areas.

Cogan (44) discovered a significant relation between a person's intelligence and his ability to rate others. Adams (2) found the same. However, his high correlations were obtained between judgmental accuracy and such closely related mental traits as observation. Vernon (200) obtained correlations of about .30 between the ability to judge strangers and the various measures of inference and intelligence.

Taft (186) found that the Judges' level of intelligence was the best index of their accuracy in evaluating the traits of their peers. The correlation was .37 for his forty judges. Academic ability had a low but positive correlation with judgmental accuracy.

Wedek (208) found saturations of g factors ranging from .18

to .34 for his several tests of ability to judge others.

Sweet (185) used boys between ages twelve and fourteen to evaluate their peers and found a positive correlation with intelligence.

The OSS assessment group (153) discovered that the Effective Intelligence rating on OSS candidates correlated .54 with their ability to describe their peers.

Dymond (56) reports a positive correlation between intelligence and the judges' ability to predict the subject's self-rating and his evaluation of others on six traits. However, a similar study by Lindgren and Robinson (124) failed to confirm this relation. In part, differences in findings are attributable to the different tests used; namely, the performance scale of the Weschler and the ACE. The study of Kelly and Fiske (119) would verify this observation. They found a significant correlation between ability to predict inventory responses and scores on the fluency subtest on the Thurstone Primary Mental Abilities, but not on the other subtests or with the Miller Analogies Test. Negative results between some measure of intelligence and prediction of another's responses or performance were found by Bender and Hastorf (18), Kelly et al (120), Estes, (63), Travers (195) (196), Taft (186), and Gage (81). All of these studies tested the perceptual rather than the inferential types of judgment.

Cline (43) also finds superior intellectual ability an asset

of the good judge. However, this trait is found to be more important for men than women in evaluating others. Furthermore, he finds a positive correlation with the Intellectual Efficiency Scale of the MMPI.

Conclusions. There is a positive correlation between ability to judge others and intelligence. The more the judgment resembles a simple perception, the less dependent is it on intelligence. The more the judgment is dependent on inference, the more is it dependent on intelligence.

b. Special abilities.

A group of studies have been conducted employing esthetic abilities and sensitivity. G. W. Allport (6) concludes from his studies that esthetic ability is a most important characteristic for accurate judgments of others and can compensate for a lack of intelligence and experience. Nevertheless, intelligence is important.

Allport and Allport (7) reported the only correlation found for "susceptibility to social stimuli" was with artistic ability. Vernon (200) found the accurate raters to be more artistic according to test scores and peer ratings. Bender (16) noted that judges who were able to write accurate descriptions of subjects on the basis of their test profiles were interested in literature and drama. However, a significant correlation was not found between scores on the Meier-Seashore Art Judgment Test and the judges' rating of

subjects' opinions. However, Estes (63) found a marked relation between ability to match character sketches and painting and dramatic avocations.

Taft (186) found in his study that the ability to rate traits accurately correlates positively with artistic sensitivity, provided the test measures ability to follow traditional artistic rules. Following non-traditional patterns correlates negatively with analytical judgmental ability. Zero correlation was found between tests of ability to judge others and the judge's ability to empathize with roles in a role-playing test.

Brunner and Tagiuri (32, p. 646) concluded that a global intuitive approach seems to improve judgment. The correlations found between the judging ability and esthetic orientation can be accounted for in part by this relation. They believe empathetic ability may be the critical capacity for accuracy in judging.

Conclusions. Apparently there is a relation between judgmental ability and interest in drama and art. The relation between accuracy and ability is less certain. However, the similarities between dramatic ability and role-playing may account for some relations observed between judgment and dramatic ability. Furthermore, artistic ability as measured or termed in these studies might be highly correlated with interest and intelligence. However, the contrary might be true as well; namely, that intelligence is correlated with artistic ability. The basic concepts of intelligence,

literary ability, empathy, and artistic ability must be more clearly delineated.

c. Social attitudes

In the oft-quoted study of Estes (63) he found that the good judge was an individual able to maintain a distance between himself and the subject. According to G. Allport (8) the good judge is a person somewhat detached and asocial in his attitudes. He noted that judges with high social values empathize with the subject and do not exercise the critical attitudes necessary for accurate judgment. He lists the following traits as descriptive of the good judge: achievement, better social relations, industry, logical and painstaking in undertakings, reserved, retiring, social intelligence, and the ability to make quick decisions.

Numerous studies have been designed to explore the effect of specific attitudes on the accuracy of the judgmental process. A study by Stagner (178) explored the influence of college students' basic attitudes toward labor and management on their perceptions of factory workers and executives. He found that the anti-labor students ascribed to themselves most of the traits they attributed to management and regarded these traits as pleasant.

Jones (114) discovered that low authoritarians in general are more sensitive than high authoritarians to variations in the psychological characteristics of the stimulus person and more inclin-

ed to pass critical judgments on the leading figures.

Scodel and Mussen (165) studied the accuracy with which authoritarian and non-authoritarian individuals were able to estimate the other's real attitudes. The hypothesis was generally supported that after a period of social interaction the authoritarians perceived the other person as being like them in social and emotional attitudes. The non-authoritarians simply perceived the other person more accurately. The research also revealed that persons characterized by high ethnic prejudice are less able to judge correctly the social traits and attitudes of others than are persons with low ethnic prejudice.

Cline (43) found that ability to judge others correlated with the absence of ethnocentric and authoritarian attitudes and low scores on the prejudice scale of the MMPI.

Lindsey and Rogolsky (125) noted increased sensitivity to ethnic characteristics as a function of increased prejudice-- a heightened or vigilant awareness of cues to ethnic origin. They conclude that people are sensitive to the personality characteristics in others which are most crucial to their own interpersonal adjustment.

Schneiderman (164) concluded that people perceive each other in terms of their general attitudes, including their feelings of identification with one another.

Taft (186) found that good judges described themselves on the

Gough Adjective Check List as organized, reasonable, intelligent, conservative in crisis, alert, calm, capable, cautious, clear-thinking, efficient, honest, logical, persevering, playful, practical, quiet, realistic, reliable, reserved, serious, sincere, thorough. The poor judges check these traits: noisy, show-off, egotistical, emotional, affectionate, clever but also careless. In brief, the poor judges are socially oriented, but not socially adjusted.

Fiedler and Senior (71) found that the more successful therapists were those who identified more closely with their patients and consequently were less objective and accurate in their judgments than the less successful ones. In his later study Fiedler (69) found that the most successful athletic, military, and industrial groups were composed of members who perceived their best-liked co-workers as being quite different from themselves. In brief, their sociometric choices seemed to be made on the basis of their co-workers' performance on the job, and not on the basis of their congeniality as companions--as was the case with the less successful groups.

Conclusions. A good judge of others is detached, task-oriented, unprejudiced, unemotional, self-sufficient. In part, these traits would account for the superiority of physical scientists as judges in one of the studies cited earlier.

On the contrary, the poor judge is socially oriented,

prejudiced, emotional, socially dependent, and consequently, unable to think of others in hard, realistic terms. These results are in relatively close agreement as these studies go, and this area might appear as one of the more rewarding ones for further exploration. However, when the mechanics of the judgmental process are reviewed later, some important modifications of these conclusions might be in order.

d. Emotional characteristics.

Among other things Adams (2) found that the good judges of others were described by their peers as touchy, lacking in courage, working for the present, independent, egocentric, and talkative. These traits might be interpreted as indicating that this group is slightly maladjusted. The good judge of others would not be expected to be so poorly adjusted that he employed the evaluative process largely as another opportunity for projection. On the other hand, a seemingly more maladjusted judge might be expected to be more apprehensive of others. This anxiety would incite them to more careful observation and judgment. Murray (146) found a direct relation between emotion and projection. He observed that the more fearful the child, the more malicious did he tend to estimate the photographs of strangers.

Several researchers found positive correlation between accuracy of judgments and various tests and ratings of personal adjustment: Travers (195) (196) with a Bell Adjustment Inventory; Sweet (185)

with the Character Education Test; Green (93) with teacher ratings of adjustment; Speroff (174) with the ratings of accident proneness of steel workers; Scodell and Mussen (165) with the California Authoritarian Scale; and Taft (186) with faculty ratings of graduate students on their personal characteristics. He also found a positive correlation between accuracy of judgment and the "psychotic" scale of the MMPI (Pa, Pt, Sc).

Kelly, Miles and Terman (120) found negative correlation between scores on the Pt scale of the MMPI and the ability of psychologists to accurately predict inventory responses of their patients. Again, on the MMPI, using undergraduates as judges, Dymond (55) found that those with good scores on the empathy test tended to be low on the Pd, Pa, Hy, Pt, and Sc scales. McClelland (122) noted that undergraduates rated by their peers as superior in role-playing activity were decidedly lower on D as well as on the above scales.

Fields (73) found a positive relation between Bell adjustment items and ability to identify emotional expression in the Ruckmick and Frois-Whitman pictures, but not with ability to predict inventory responses after observing Ss' expressive behavior.

However, Gage (80) failed to confirm this relation when the criterion used was ability to predict inventory responses after observing Ss' expressive behavior. Estes (63) asked his subjects to match character sketches with a brief film of expressive

behavior. The results yielded zero correlation with the Bernreuter.

Taft (196) found a negative correlation between ratings on "personal soundness" and matching mosaic productions with the acquaintances who made them. Taft concludes there is a positive relation between good adjustment and ability to rate others. However, the evidence is more clear-cut in inferential than in perceptual modes of judging. In both inferential and perceptual judgments the MMPI singles out the poorer judges by their elevated psychotic scales, especially the Pt scale.

Conclusions. Many of the studies indicate that the poor judge of others is usually less adequately adjusted emotionally. Probably he is unable to differentiate between his personal feelings and the objective demands of the task. However, if the task of judging others is largely a matter of projection, and if the emotionally unstable judge evaluates a relatively stable individual, then it would be expected that his evaluations would be inaccurate.

Furthermore, many of the studies found that the poor judges had high scores on the psychotic triad of the MMPI, especially the Pt scale. Persons with high scores on this scale are usually withdrawn, perseverative in their thinking and basically unrealistic.

e. Insight and adjustment.

Defining insight is relatively simple; knowledge of self. Evaluating insight is extremely difficult. In the opinion of the

writer, most investigators have been unable to advance highly convincing evidence that any person's evaluation of himself is actually different from the way he sees himself. What an experimenter may legitimately say is that a person's evaluation of himself is either quite different from other people's evaluation of him, or is highly similar. Furthermore, the frames of reference used by both the observer and the observed may be as various as the numerous selves described by James (111). For example, the subject might describe himself as he sees himself or as he believes others would describe him. The way the subject is described will most likely depend on whether the observer is a peer, a superior, or an expert. Consequently, as used experimentally, insight is a relative concept and estimates of its accuracy have significance only in terms of the methods and criteria used in the experimental situation.

One of the complications brought out by various studies reveals a tendency on the part of judges to rate themselves high on desirable traits and low on negative ones. This trend was reported by Allport and Allport (7), Cogan et al (44), Green (96), Sears (166), and Taft (186). This tendency clearly distorts the scores. However, Adams (2) compared good judges of self with good judges of others and found that the former were more socially oriented, while the latter were more egotistic. The good judge of self is more intelligent, possesses more desirable emotional characteristics, and is more socially minded.

Vernon (200) obtained somewhat similar results. The good self raters were distinguished by traits of sociability, humor, and high intelligence in dealing with the abstract. The good judge of others was less sociable, intelligent, but more artistic. Taft (186) used the adjective check list of Gaugh and found sixteen adjectives distinguished the good judge of others at the .01 level. Ten adjectives distinguished the poor judge from the good one. Again, the good judge of self tended to be more sociable.

Concerning self-insight and judgment ability, most of the researchers found a positive correlation between this trait and ability to judge others as long as the study was confined to a single trait. This finding is true for both desirable and undesirable traits and held true in studies by G. Allport (8), by Rokeach (161) on perception of beauty in women, by Green (96) on leadership, and by Dymond (55) on empathy, and by Sears (166) on obstinacy and disorderliness. However, Sears (166) and Weingarten (210) found judges lacking insight into their undesirable traits tend to project them into persons they are judging, more so than judges possessing the same trait, but possessing insight.

In measuring insight on several traits, the relation between insight and judgmental accuracy is not clearly defined as in the above instances. Vernon (200) found no relation between various measures of ability to judge and peer ratings on insight of the judges. Frenkel-Brunswick (75) failed to find a consistent rela-

tion between three psychologists' self insight and their accuracy in rating adolescents on Murray's (146) system of needs.

Taft (186) did not find a significant correlation between judges' scores on the over-all index of ability to judge others and the index of ability to judge self.

However, Norman (147) found a positive correlation between the over-all ability of seventy-two graduate students to judge themselves on thirty-one traits and their ability to judge their peers. Both peer and staff ratings were used as the criteria.

Taft (186) found that good judges of self are average judges of others; while average judges of self tend to be good judges of others. However, the good judges of self might be either good or poor judges of others. He concludes

Persons who show insight into their own status with respect to their peers on individual traits tend also to rate their peers accurately on those traits. However, when over-all indices are obtained of the subject's variety of tests of these abilities, the relationship is not clear-cut (186, p. 17).

He points out a need for investigating motivational factors in making judgments on others.

In his theory of behavior Rogers (159, Ch. XI) integrates personal adjustment, insight, and accuracy of perception of others. The interrelation of these concepts is fundamental to his system and is developed from material obtained from client-centered interviews rather than from experimental data.

Basically, he believes that the goal of the person is self enhancement. However, the individual seeks this goal only with behavioral patterns which are consistent with his concept of self. His concept of self is built up from the sensory and visceral experiences he is able to accept as a part of himself. Those he cannot accept as in keeping with his self concept he excludes from consciousness. To do this he employs various defense mechanisms. To be effective, these mechanisms must exclude anything which is likely to arouse these desires, impulses, and feelings in him. For example, if he is unable to accept his feelings of aggression toward others, he would probably feel anxious with someone who expresses aggression rather freely. As a result, he perceives this person as a threat rather than as an individual with certain unique characteristics. Thus, he perceives the other according to the way he perceives himself. The more experiences he feels he must deny to awareness, the more constricted is his perception of himself and consequently his perceptions of others. Adjustment and insight go hand and hand. Insight is merely the capacity to recognize and accept our experiences for what they are. Insight into self is a prerequisite for accurate perception of another.

Several investigations have been designed to explore the relation between acceptance of self and acceptance of others. One by Sheerer (168) reported an r of .51 (.01 level) between accept-

ance of self and acceptance of others with ten patients of non-directive counseling on a fifty statement attitudinal inventory. Berger (19) found significant positive correlations between measures of expressed acceptance of self and acceptance of others. McIntyre (136) stated similar conclusions from his study using a sociometric device.

Holdt (108) also studied insight or the accuracy of self-evaluation. He found insight positively related to intelligence, to active, adventurous living in the world of reality, to friendly dominance, social adjustment, and possibly constitutional strength.

Consequently he believes there is a strong relation between insight and projection or living in the world rather than one's mind. He affirms this because judgment on behavioral items must be made by comparing one's own behavior with that of one's contemporaries. In terms of specific findings he reports only a slight tendency for subjects to overrate their most prized needs and underrate the distasteful ones. However, he notes a definite and positive relation between the social acceptability of a need and the degree to which people rate themselves accurately. He offers this explanation:

When a tendency is thought shameful or if recognition of it in oneself arouses anxiety, the demand to rate the amount of it that one possesses is a threat to self-esteem to which people will react according to the nature of their principal defense mechanism. If projection is peculiarly characteristic of that person he will tend to attribute the quality in question to others, by contrast

to whom, he will then seem to have little of it (108, p. 98-99).

Conclusions. Subjects who accept themselves tend to accept others. Self-acceptance might be regarded as one feature of insight. In general, subjects who have insight into single traits in their personalities tend to rate their peers accurately on these same traits. On insight relative to a multitude of traits, the relation between self-understanding and ability to judge others is less clearly defined. If, instead of over-all insight, reactions to specific traits are explored, there is more evidence that the general desirability of the trait is influential in the accuracy of rating, and also that the individual's reaction to the specific trait influences his judgmental accuracy. If he rejects the trait he projects this trait to the person he is rating. These observations would tie in with previous conclusions concerning the relation between emotional adjustment and judgmental accuracy: the emotionally maladjusted judge tends to find more traits unacceptable, projects his feelings more readily, and consequently makes less accurate judgments. His perception of his associates resembles a projective technique.

3. Conclusion. Is ability to judge others a trait or a characteristic composed of other traits?

Is there a generalized trait of accuracy in perception of others?
Does a person judging several individuals tend to evaluate each with

approximately the same degree of accuracy?

Some research justifies the trait concept; other does not. G. W. Allport (7) considered ability to judge others as a trait. Murray (146) found rather consistent differences among his judges in respect to the validity of their ratings. Gage, Leavitt, and Stone (90) conclude from their studies that there is evidence of an over-all accuracy in perception of others. This accuracy extends to both strangers and non-strangers alike, and even if the acquaintance is brief.

Calvin and Holtman (37) found that the correlation between the group rating and the self rating tended to be relatively constant, indicating that this could be considered a new measure of personality. Bronfenbrenner and Dempsey (30) found an over-all sensitivity between judges of .73.

Strodbeck (184) re-examined these findings and claims there is no basis statistically for asserting an over-all sensitivity is indicated.

In contrast, Halpern (101) in his study using eighty items from the Guilford-Martin GAMIN factors found no over-all predictive accuracy on items if the judge answered in a direction different from the subject. But he did find a generalized over-all accuracy for judges answering the items the same as subjects.

On the other hand, Cline (43) concluded that some judges are generally good, and some are generally poor. The particulars are explained more fully elsewhere. Bronfenbrenner and Dempsey (30) found that a judge who evaluates one subject accurately tends to evaluate all

subjects accurately. Wittich (213) maintains that the ability to predict the responses of others may be regarded as a trait.

Conclusions. The general conclusion that the ability to judge others is somewhat of a trait seems founded in conclusions and data. However, some of the observations made by other investigators exploring factors relative to the validity of these conclusions are reviewed later. These studies point out that the other characteristics of the experimental situation and the methods used to treat the data were partially responsible for these results.

- B. Characteristics of the subjects. Some of the investigators began to suspect that accuracy of judgment is not an exclusive feature of the judge, but is influenced in part by characteristics of the subject.

Estes (1937) found that some subjects were easier to judge. He reached this conclusion because it was found that all judges evaluated these subjects more accurately than others. The basis for this conclusion resided in the subjects' behavior. Expressive movements were judged above chance, but covert qualities were poorly rated. The subjects uniformly judged more accurately were all "open" personalities. Bronfenbrenner and Dempsey (30) found that a subject evaluated accurately by one judge tends to be evaluated accurately by all judges.

Gage, Leavitt, and Stone (90) observed that certain individuals tend to be judged accurately by most judges. They conclude that "... the subject who is estimated correctly by one person tends to be judged correctly by all" (82, p. 44).

Cline (43) found that some interviewees could be judged better than others. Wittich (213) concludes that the capacity to be predicted by others may be regarded as a trait. Furthermore, there is a positive relation between personal adjustment and the success with which others understand him.

Bruner and Taguiri (32) reached conclusions similar to Estes. They found that "Accuracy depends on having clues to work on. Traits with little behavioral manifestation are poorly judged. Individuals whose expression is hampered are harder to judge" (29, p. 648).

Rimoldi (158) reached somewhat analogous conclusions. He found that subjects with more unusual personalities were easier to predict with accuracy.

Chodorkoff (41) explored a more specific aspect of personal adjustment; namely, the relation between the subject's ability to be judged and perceptual defense. He found that the higher the correlation between the subject's sort and that of the judge, the lower the subject's perceptual defense. Perceptual defense and personal adjustment were found to be positively correlated.

Calvin and Holtzman (37) compared the discrepancy scores between the subject's self concept and other's perception of him. They found that the more poorly adjusted an individual is, the greater the discrepancy. Furthermore, individuals (relatively normal) showing poor insight into their own level of adjustment are more likely to be maladjusted than those who show good insight.

Finally, the activities of judge and subject become more highly synthesized in the study by Heftel (105). He advanced the hypothesis that the emotionally disturbed individual is more erroneous than is the well-adjusted in his prediction of how fellow group members will rate him. The adjustment index was obtained from observation made by members of his group. Predicting ability was measured by a rating prediction test. A correlation of .80 was obtained. However, when the members were asked to rate certain aspects of group dynamics (a more complex evaluation) there was poor agreement.

Conclusion. Several of the investigators noted that the characteristics of the subject must be taken into consideration for any realistic appraisal of the accuracy of the judge. In general, the more direct the relation between the subject's motivational pattern and behavior, the more accurately is he judged. Maladjusted subjects whose behavior is complex, defensive, and an indirect manifestation of their motives are more difficult to judge accurately.

C. Relations between Judge and Subject which influence accuracy of judgment.

1. Acquaintance. Is there a difference in judgmental accuracy based primarily on how well the participants know each other? Are the circumstances of their acquaintanceship revelant?

Bronfenbrenner and Dempsey (30) conducted a study using eight college students. Each student interviewed and rated each of the other seven. The authors found that the ratings made by each student on the seven others tended to have characteristics similar to all inter-

views. However, the specific nature of the interview situation for each pair of students varied. They concluded sensitivity is a two-way process. Student A must be sensitive to Student B in order for B to be sensitive to A. Furthermore, social sensitivity is a function both of the enduring qualities of the person as well as the particular situation.

However, these findings probably should be accepted with some caution. Strodtbeck (184) viewed the above study critically. He claimed that the differences reported between persons (as interviewers) and the differences between situations (interviewing the various students) were not justified statistically.

2. Like and dislike. Are the judges influenced in the evaluation of the subject by their feelings toward him.

Lundy and Katvosky (131) developed a self acceptability score by comparing the judges' real sorts with his ideal sort. They found that judges described persons they liked best as more similar to themselves than persons they liked least. However, in part this similarity was determined by the individual's acceptance or unacceptance of himself.

In evaluating others, a greater degree of acquaintanceship, if accompanied by intensification of affection, makes for more favorable ratings, according to Knight (122), Shen (169), Ferguson (65). However, Fiedler, Blaisdell, and Warrington (72) found that feelings are often contingent on how similar the judge thought he was to the subject. They noted that judges assumed greater similarity between them-

selves and positive sociometric choices than between themselves and negative sociometric choices.

In a later study Heftel (105) found that individuals rated their best friends just as threatening or more threatening than their least liked sociometric choices.

Davitz (51) observed thirty-nine children in a summer day camp and concluded that the highest sociometric choices of these judges tend to be perceived as more similar to themselves than the lowest sociometric choices.

The highest sociometric choices tend to be perceived as more similar to the self than they actually are; the lowest sociometric choices, as less similar than they actually are. The actual similarity to the highest sociometric choices is no greater than the actual similarity to the lowest sociometric choices. He concludes that there is

. . . a need to decrease the actual dissimilarity between oneself and the valued other and this need may be satisfied with the identification of oneself with others or by identification of others, through perceptual distortion, with oneself (51, p. 176).

Conclusions. Various phases of the experimental evidence indicate that judges tend to ascribe favorable traits to subjects they like. Furthermore, the judges frequently like the subjects because they perceive them as highly similar to themselves; in fact, they assume more similarity than actually exists. A possible explanation for this tendency is that many judges experience a need to see their self image in others. This need is strong enough to influence to the point of

distortion their perceptions of the subject.

3. Similarity and difference. Are the judge and subject alike or different in relation to background and emotional and intellectual traits? Do these similarities and differences have a bearing on the accuracy of the judgments?

G. W. Allport (7) definitely believes that they do. He holds that judges rate the subjects most accurately who are most like them in age, race, culture, and background. Furthermore, the judge should be about as complex a personality as the subject he judges; not more so.

Halpern (101) using the Guilford-Martin Inventory of the GAMIN factors found that judges predict with greater accuracy the responses of subjects who are similar to them. Furthermore, on items where the judge answers in the same direction as the subject, the judges' prediction proves more accurate. Items not answered in the same direction yield no greater prediction between similar judges and subjects. He concludes that "It may be that people can more readily recognize in others what they have experienced, on the same level, in themselves" (101, p. 452).

In contrast, Rimoldi (158) found that the similarity of personality of judge and subject is not related to accuracy. In fact, there is a suggestion of a negative correlation between accuracy of judgment and similarity of personality.

Bruner and Tagiuri (32) concluded from their review of the literature on perception of people that

Accuracy is aided by similarity between judge and judged. To some extent this may be a function of "resonance" between judge and judged; to the same extent it may be a function of better acquaintance with people like himself, with more intervening opportunities for observation of their behavior. To some extent it could be projection, when the other person is like oneself (32, p. 680).

Conclusions. There is more evidence in favor of judges predicting accurately the responses of subjects that are like them than of subjects different from them. However, the results are not uniform. Perhaps this discrepancy occurs because if judges and subjects are heterogeneous, the judges will evaluate accurately only the ones like themselves. If subjects and judges are homogeneous, the judges will be able to evaluate the differentiating features more accurately. This point calls for more extensive elaboration later. But here again, if judgment is actually projection, the basis for like evaluating like accurately is simply a matter of projection.

D. Intake. This factor includes what the judge observes about the subject in the experimental situation. In the studies reviewed below the judges' observations of the subject were made under a variety of different circumstances.

1. Personal. The judge observes the subject in some direct manner, rather than in a representational manner.

a. Life situation. Many studies have been conducted with judge observing subject in a usual life situation.

Davitz (51) in his study used thirty-nine children who were residents in a summer camp. Taft (186) conducted his study in a

residence hall over a week end. During this period the members interacted with one another. This procedure was somewhat similar to that used in the OSS study (153). Webb (207) conducted his study with fraternity members. Gage (80) (83) studied leadership in discussion groups.

Later Gage, Leavitt, and Stone (91) (92) studied students' opinions and perceptions of their teachers and vice versa. Stern, Stein, and Bloom (179) also estimated teachers' evaluation of pupils.

Fiedler (69) studied the effectiveness of various military, athletic, and industrial groups in terms of interpersonal perception.

2. Interview. The judge evaluates the subject in terms of data derived from an interview.

Murray (146) had his judges conduct extensive interviews with the subjects over a lengthy period of time. Bronfenbrenner and Dempsey (30) arranged for their participants, eight students, to interview and rate each other. Kelly and Fiske (119) evaluated graduate students in psychology and made predictions on their progress during training. Wedell and Smith (209) used the interview method to determine the attitudes of their subjects.

Fiedler and Senior (71), as well as Rogers and Dymond (160) studied the perceptual processes of patients and therapists. Stephenson (182) employed several judges to interview and rate a single subject.

Williams (212) investigated the relationship between evaluations made by peers and military leadership.

Bieri (22) noted more accurate predictions of partners' responses on the Rosenzweig Picture Frustration Study after interaction than before. The interaction centered around exploring grounds for mutual agreement on experiences, as well as preferred activities.

3. Impersonal. The following studies are representative of experimental situations in which the judge bases his evaluations of the subject on some kind of representational presentation.
 - a. Sound motion picture. Gage (81) and Gage, Leavitt, and Stone (90) presented the judges with a sound motion picture of representative behavior of the subjects. Cline (43) ran a sound motion picture of an employment-type interview conducted on nine college students to be rated by 316 judges.
 - b. Descriptive essay. Relatively few studies have used this method of presentation of data. Rimoldi (158) directed his subjects to write essays on several topics. These essays were presented to the judges, who were instructed to predict the subjects' responses on two objective tests and a Q sort.
 - c. Projective tests. Aside from the numerous studies of professional diagnosticians evaluating patients in terms of projective data, relatively few experimental studies in this area have been made. Chodorkoff (41) presented four judges with Rorschach, TAT, and Word Association Test data and asked them to do a Q sort based on

this material. Hanks (100) used case history material for his judges to evaluate the subjects.

- d. Photographs. Buzby (36), Guilford (98), Kanner (116), Jenness (112), Coleman (45), and Fields (73) conducted studies in which the judges interpreted emotional expressions in photographs. Rabin (157) presented his judges with the task of identifying the pathological types represented in the Szondi pictures. Smith (172) asked his judges to arrange various photographs of people closer or farther away from themselves so as to approximate the distance at which the judge felt comfortable with the photos.

Conclusion. The manner in which the subject was presented to the judge for evaluation obviously influenced the results. However, to what extent judgmental accuracy is a function of manner of presentation has not been systematically explored. In a life situation subject and judge are able to interact and the judge is able to gain more information about the subject than by photographs. However, in a life or interview situation the data obtained by several judges on one subject would probably not be identical, and in some cases, not even highly similar. This phenomena was noted by Lewin when he observed that certain judges are more skillful in eliciting clues from subjects than are others. Furthermore, the judge invariably notes features in the subject pertinent to the nature of his interaction with the subject. In summary, the more realistic and extensive the data gathered from the subject, the less likely is this material subject to experimental control. The more artificial the data, the more extensive are

the experimental controls possible. However, as that data gathered departs from the life situation, the less pertinent is the material to a realistic description and understanding of personal perception and interaction.

- B. Integration. This term signifies the mental process occurring between intake and output. The intake data integrated with the data previously gathered by the observer results in the output.

Certain inferences can be made concerning difference of the data between intake and output. This process of integration is obviously available only to the perceiver himself. The validity, comprehensiveness, and communicability of these reports have been extensively questioned.

However, as at least one writer, Mayo (134) emphasizes, understanding another person is entirely different from knowing an object. We do not understand another person unless we know something about his state of consciousness or his inner experiences and evaluations. Consequently, we must explore the way an individual knows himself because we can only know something about another's inner experiences by some comparisons with our own. The first question, then, is what is self-knowledge, and what do we know when we know ourselves.

1. Self-knowledge. In the past the self has been considered as knower and/or known. The self as knower has been considered as subject, ego, agent, act, and substance. The self as known has been referred to as object, structure, and matter.

Initially the concept of self-awareness was not employed as it is by recent writers. Aristotle (12, Bk. III, Ch. vi, 430b, 21-26) and

St. Thomas (192, Q. 87) speak of the process by which the intellect becomes aware of itself. When St. Thomas speaks of the intellect knowing itself in its act, he refers to an operation by which the intellect is aware of itself by a process of reflection on the nature of its act of knowledge of things. He does not hold that the intellect is aware of itself as an immaterial substance. However, as pointed out by Frondizi (79), this is the position maintained by Descartes (53) and Berkeley (20, No. 139).

The more contemporary usage of the concept of self was advanced by Locke (127). According to the latter, the self is the principle of personal identity. Personal identity is maintained not because the self is a substance, but because consciousness identifies one's thoughts as one's own and recognizes them as past or present.

James (111) presented a rather comprehensive description of his consciousness of self. He describes material, social, spiritual, and pure selves. Self and non-self are distinguished by our feelings toward various objects. The more intense the feeling in relation to a given object, the more is it regarded as a part of the self. This identification applies to our abilities, our friends, and our material possessions. Nevertheless, James maintains that everyone believes there is some element or component of consciousness that is the real self. He discusses the possibility of this self being immaterial and tries to catch a moment of pure immaterial awareness in his introspections. He believes he failed in this and even in his closest approximations, what

he is conscious of could be reduced to various kinesthetic sensations. Nevertheless, these introspections of James are in agreement with the position of St. Thomas. Their statements would both imply that we are unable to experience ourselves as pure spirits. St. Thomas takes this more for granted while James makes a sizeable issue of it. In any case, to use James' terms, but St. Thomas' interpretation, the pure ego or pure self permeates all other selves: material, social, and spiritual, and consequently is not experienced as a separate immaterial entity.

Rogers (159, p. 501) presents a Gestalt-like description of the self:

The self-structure is an organized configuration of perceptions of the self which are admissible to awareness. It is composed of such elements as the perceptions of one's characteristics and abilities; the percepts and concepts of the self in relation to others and to the environment; the valued qualities which are perceived as associated with experiences and objects; and the goals and ideals which are perceived as having positive or negative valence. It is, then, the organized picture, existing in awareness either as figure or ground, of the self and the self-in-relationship, together with the positive or negative values which are associated with those qualities and relationships as they are perceived as existing in the past, present, or future.

The above definition and description is regarded by the writer as a fairly comprehensive summary of the notions presented by the other authors and constitutes a workable description of self-knowledge.

2. Knowledge of others. As mentioned above, knowledge of others cannot be treated independently of knowledge of self. Any theorist who formulates a cognitive system which accounts for our knowledge of

others in terms of our knowledge of objects is at least partially incomplete. How we develop an understanding of others has been explained in terms of empathy, projection, inference, intuition, redintegration, identification, and various combinations, rather than as simple perception or judgment.

a. Inference.

One of the earliest attempts to explain interpersonal perception in terms of inference was presented by D. K. Adams (1, p. 252).

Any experience or mental process in another organism can be inferred from structure, situation, history, and behavior only when a similar experience or mental process is or has been associated with similar structure, situation, history, and behavior in oneself; and the probability of the inference will be proportional to the degree of similarity.

Fundamentally, inference is an associative, atomistic process. James (111) follows these lines, but adds "a feeling of relation."

Hollingworth (107) varied this slightly with the concept of redintegration in which one sensory cue of an entire situation when experienced is able to awake the entire experience in consciousness.

However, these explanations miss an apparent, everyday experience; namely, that our aroused emotions are not always those of the person observed and may actually be contrary, if not quite different.

Wundt (209, III, Ch. II, Sec. 5) observed that our knowledge of another person requires, in addition to inference, a process of

thinking of one's own personality in terms of the other's.

Allport (8) regards the inference theories as inadequate because they are untrue to introspective evidence; namely, the object is perceived as external, while the meaning of feelings occurs inside the mind. Understanding seems to occur without prior relevant experience. The understanding of emotional behavior does not arouse similar feelings in the observer.

b. Empathy.

In one form or another the theories of empathy hold that we understand others by imitating the external manifestations of their emotional expressions, so as to feel or experience their emotions in ourselves, in some way.

Lipps (126) speaks of knowledge of others as empathy and as different from knowledge of objects or oneself. An empathetic judgment of the emotional state of another person requires the mimicry on a miniature scale of his facial and bodily expressions.

F. Allport (5, p. 229) found some validity for this notion when he discovered that the interpretations of facial expressions are more accurate when the judge actively imitates the expressions of the subjects than when the judge merely perceives these expressions passively.

Freud (76, p. 66) admits that empathy is involved in the understanding of others, but only for people relatively unfamiliar to us. For those similar to us and who have some emotional value,

they are understood by identification.

G. Allport (8, p. 532-533) observes that these explanations fail to account for situations in which we seem to understand someone's emotion, but in terms of our feelings in the situation are unable to empathize with the other person.

c. Intuition.

This process is close to a type of understanding akin to insight, but applied to other people. It is knowledge of them not developed solely from inference and analogy.

G. Allport (8, p. 533-542) distinguishes five different kinds of intuitive knowledge: (1) Direct perception; (2) Innate knowledge and identity; (3) Immediate knowledge; (4) Perception of individuality; (5) Verstehen. Fundamentally he maintains that knowing a person intuitively is knowing him from his internal point of view. However, the process of understanding requires both intuition and inference. To explain this fully he remarks

There are indeed sensory cues, empathic processes, redintegrative activity, and swift associations--all as asserted by the theory of inference. But it is also true that these processes are normally subservient to the structuring activity of the mind that takes place whenever it is guided by external pattern and by an interest in what is concrete.

In any given act of understanding it is not possible to distinguish products of intuition from products of inference. The original sensitivity to form is certainly an a priori possession of each individual, as is his capacity for sustained interest and concern with form. On the other hand, the employment of associational thinking and analogy is likewise an intrinsic part of the process of understanding. . . .

Our understanding of personality comes, then, partly from without, but partly also from within. The first cues come from the structuration of the outer field; where these prove insufficient (as they usually do) then memory imagination, and the abstract conceptualization come to aid the process. We obtain what organization we can from the outer field and supply the remainder from within (8, p. 547-548)

- H. F. Adams (a, p. 248) accounts for the generalized process of interpersonal perception as well as the observation of particular traits in the subject. "The complement of empathy is projection. We feel something (by empathy) and imagine that the other person feels the same (projection)." Later these projections are subjected to critical evaluation by comparison with objective facts. This might be called "critical empathy." By setting oneself in the flow of the other's words and movements "identification" occurs, by consciously putting oneself in the place of another. By opposing the flow of the words and movements of the other person the observer feels how the subject's attitudes and behavior affect him. This is "recipathy" and is more likely adopted with friends. While both empathy and reciprocity will promote distortion, the distortion is greater if the actual emotional processes are denied. If someone denies the emotions that are actually operating, then they "function unconsciously and prejudice all his observations."
- d. Perception of particular traits in others.

The following studies are concerned primarily with the processes involved in the perception of specific traits in others and how

the process is influenced by the specific experimental situation.

Lewin (123) stresses the importance of discovering the specific cues people use to make certain inferences about particular traits. The specific interpersonal situation in its relevant aspects must be studied because "Many of the cues used in judging another person are cues that we are instrumental in producing. Since, in this case, the object of our perception is reactive to us, we evoke cues from him by probing, or, indeed, simply by being in his presence."

He offers the possibility that persons with certain traits and consequent behavior might elicit specific behavior and therefore see them in this way. For example, a dominant A elicits submissive behavior from B, and as a result sees B as submissive.

Ichneiser (110) pursues a similar line of thought relevant to perception and interaction. He believes that in interacting with another person an individual tends to notice features in the other person that will affect the outcome of the interaction. Furthermore, after extensive practice, he becomes more skillful in utilizing relevant cues in judging.

Bender and Hastorf (17) remark that we must distinguish between forecasting the day-to-day behavior of another and judging his motives and attitudes. Many of the notions we have about others are not necessarily verbalized because we have no need or motivation to do so.

Murray (146) observes that it is just this kind of observation

that is the task of the personologist. Actions are relatively unimportant. He must discover the person's attitudes and motives to understand and explain his behavior.

In his study on insight Holdt (108) explains the dynamics of personal perception in this way. If a person regards a certain trait as shameful or anxiety producing if recognized in him, the request to rate oneself accurately will elicit his characteristic defense mechanism. If it is projection he will attribute this trait to others so that in contrasting himself with them, he will seem to have little of this characteristic. Favorable traits will be more accurately rated.

Fensterheim and Tresselt (64) concluded that an individual's high values are not used as anchoring points in his judgment of others, but in so far as the subject was perceived as resembling the judge in terms of values, the more the subject will be liked and a halo effect will be found.

Conclusions. Concerning what we know when we know ourselves, it could be said that we know ourselves exclusively neither as subject, nor as object, but as subject and object simultaneously. Perceiving another person is not the same process as perceiving a thing. Only because we have knowledge of ourself can we have knowledge of another.

Fundamentally, Allport and Rogers agree in this: that to understand another person is to perceive him from his internal

frame of reference. This can be done only by reconstructing his experiences in the perceiver's mind so that they can be viewed in a manner analogous to his own.

According to the other views presented, in reconstructing his experiences the observer draws on the data from perception to the extent that it is available and then adds to this material from memory, imagination, and inferential processes. In these operations, defensiveness, projection, and other mechanisms influence or distort the basic perceptual data so as to establish an equilibrium between his concept of self and sensory experiences.

F. Output. The judges' description of the subject.

1. Essays. Just as this has been an unpopular mode of presentation of data for the Experimenter to evaluate, so also has it been unpopular as a manner of description of the subject. The OSS study (153) used this approach. However, the candidates' evaluation of their peers had such low reliability that the results were not found very useful.
2. Objective psychological tests and ranking scales. By far this is the largest area of exploration. Frequently the two are combined. The predictions of high and low sociometric choices for a variety of situations and tasks have been compared with their sociometric choices.

Bauer (14) studied the reactions of 145 subjects to a generally favorable personality profile of themselves. Subjects were asked to adjust the ratings with which they disagreed. Of the ten percent of the ratings changed, most were in the favorable direction. The author

concluded that subjects' self evaluations are of questionable value to validate personality diagnosis.

Chodorkoff (41) reached a similar conclusion. He contended that defensiveness is an important variable in the self-judgment process. Consequently self reports cannot be relied upon to give the same picture of personality as one obtained from judges.

Harvey and Sherif (104) studied the effects of ego-involvement on subjects' estimates of their own and others' performance on objective tasks. The distortion in estimation of a competitor's performance varied with the individual's favorable or antagonistic attitude toward his competitor. There is minimum distortion where there is strong positive ego involvement, moderate distortion where competition, though friendly, exists, and marked distortion where there is antagonistic competition.

Heftel (105) found that in estimates made by group members concerning how other group members would rate them, there was a general tendency to overrate oneself mostly on intelligence. There was an underestimate on physical appearance. The writer would regard this as being consciously defensive of physical appearance and unconsciously defensive of intellectual competence.

Holt (108) found in his study on insight only slight over-all significant tendencies for subjects to overrate their most highly prized needs and to underrate distasteful ones. His general conclusion is that there is a direct proportion between socially acceptable needs

and the degree of accuracy in the subject's self rating.

In one investigation Fiedler and Senior (71) studied the perceptual processes of fifteen patient-therapist pairs. They found that the inaccuracies in perception of the other person's feelings (of which each member is only partially conscious) stem primarily from the perceiver's unconscious blocks. The patient's need to see the therapist as near perfect will distort the patient's perception in that direction. The therapist's desire to be helpful will distort his perception of the patient as someone in need of help.

Webb (206) concluded from his study that there was considerable disparity between the individual's concept of himself and the group's evaluation of him. Personal over and under-evaluation were, in relation to the group studied, associated with the acceptability of a particular trait. There was a consistent tendency for over-evaluation.

Taylor and Combs (190) explored the relation between adjustment and the admission of mildly undesirable behavior. They hypothesized that well-adjusted subjects should be able to accept more unflattering or threatening facts about themselves than would poorly adjusted. Using 180 sixth grade students as subjects they verified this hypothesis. They concluded that if this study is valid we should expect the well-adjusted, and not the poorly adjusted, to mark the more damaging statements as true about themselves. In the writer's opinion the negative statements not accepted by the maladjusted might reflect their more rigid, circumscribed manner of thought and behavior.

In their survey of the literature on the perception of persons, Bruner and Tagiuri (32) concluded that there are certain characteristic errors made in the judgment of others. Two of the most obvious are halo effect and logical error, that is, the unwarranted assumption that certain traits go together. The presence of one of them in the subject leads to the conclusion that the related cluster is also present.

Conclusion. These studies cast serious doubts on the validity of paper and pencil types of questionnaires if these are considered as descriptive of actual traits and behavior. However, if we regard the perceptual process as more akin to artistic interpretations and not as photographic reproductions of reality the findings are both understandable and valuable. There is evidence of a tendency to overrate the positive traits and underrate the negative ones, in oneself. In perceiving another, the judge's perception of the subject is influenced by his needs as they are manifest in the experimental situation. Output must be considered in terms of the judge, subject, their relation, the situation, and the purpose of the questions.

3. Q-Sorts. The Q-sort as used here is a set of statements of personal traits, attitudes, behavior. The subject is requested to place each of the statements in one of several piles, depending on whether the statements are descriptive of him or unlike him. This is a forced distribution because a specific number of statements are to be placed in each pile.

Q-sorts were developed as types of questionnaires uniquely suited

for gathering personal data to be treated by the new Q-technique of factor analysis. Burt (34) and Stephenson (180) were two of the early developers of this technique. The procedure simply utilized correlations between persons, rather than between tests, as was done in R-technique.

Stephenson (182) wrote some of his early sorts in categories of Jung's typologies. Stephenson regarded this technique as superior to R in many ways for studying people because many of the assumptions basic to R need not be made for Q. For one thing, there is no need to assume that any trait or factor found in one subject will be found in all or in any other subject (182, p. 21). Furthermore, additional modes of exploration were possible. Many sorts could be executed by a single person in his various frames of reference or selves. Ideal, Former, and Future Selves could be sorted. After factor analysis, the structure of his self concept could be explored and questions answered. How many selves does he really have? Does his therapist see him as his peers do, as his parents do, or as he sees himself (182, p. 255-268)?

Stephenson directed a number of studies in this general area. In one he requested several experts and several novices to diagnose a psychiatric patient. His analysis disclosed that the experts as a group perceived the patient in a manner quite different than did the novices (182, p. 312-322).

Q sorts have been extensively employed by Rogers and his group in studies on therapy, including Fiedler and Senior (71), Seeman (167),

Stock (183), Sheerer (151), Phillips (154), and Gordon and Cartwright (95).

Rogers and Dymond (160) were concerned primarily with the changes in the self concept as a function of therapy. Before starting a series of psychotherapy interviews, the client completed four sorts representing her Real, Ideal, Remembered Self (as she was a year and a half ago), as well as her concept of the Average Person. The counselor sorted on the patient as well. Rogers found that the counselor's sort on the client at the beginning of therapy correlated .35 with the client's Remembered Self and only .14 with her Real Self. Rogers believed the Remembered Self represents a less defensive interpretation than does the Real Self. However, the counselor's sort on the patient at the close of therapy correlated .57 with her Real sort completed at that time, but correlated .66 with her Real Self sorted one year after the close of therapy.

These results indicate that another person, even an expert acquainted rather intimately with the subject, will perceive the subject in a somewhat different manner than she actually perceives herself. Furthermore, as was indicated by subsequent results from later sorts, the counselor was more perceptive of what the client was really like, but the client became aware of her actual self only at a later time.

In the studies reported by Rogers above, emphasis is usually not placed on the factors contributing to accuracy or distortion of perception of another. In keeping with his basic theory, an individual's

perception is reality. Bowman (27) requested patients to complete three Q sorts both before and after therapy:

(P) Proper Self--what is expected of me

(W) Wished for Self--what I would like to be

(C) Real Self--what I am currently.

He found that throughout the course of therapy W and P changed little; C changed the most. These findings indicate further evidence that these sorts represent a meaningful measure and that they vary independently of each other in the same person.

In the recent study by Fiedler (67) some criticisms of the Q sort are offered. It is too complex for those of low intelligence, is cumbersome to administer and handle. Furthermore, according to Warrington (204), unforced scale items were shown to have a higher reliability than either Q sort correlations or his later devised "Q blocks." (A "Q block" is a set of five statements which the subject ranks or checks the most and least applicable.)

Actually, the reliability of Q has not been extensively explored. Stephenson remarks that the reliability of the sorts he used are all .80 or above. On their control group Rogers and Dymond (160, p. 65-66) obtained an average correlation of .58 between the Real and Ideal Selves before therapy; and after therapy, an r of .59. As would be expected, statistical tests failed to disclose a significant difference. The writer believes these results represent fairly high reliability.

Conclusions. The Q sorts have been used in a variety of ways.

Fundamentally this technique represents a way in which the subject may describe his several internal frames of reference or his several selves. Reliability, if the term is to be used, varies from sort to sort, and within sorts; that is, the Ideal self would vary less, both between persons and between administrations for any one person, than the Real self. The Q sort is less suitable for below-average subjects and is difficult to administer and handle on a large scale.

However, Q sorts have been found useful in analysis of the process of psychiatric diagnosis and the changes occurring in patient and therapist before, during, and after psychotherapy.

G. Evaluation. In this section the various methods are criticized which are used in the study of personal perception.

1. Q technique and Q sorts.

Mowrer (142, p. 367-374) in his extensive review of Q technique concluded that neither R nor Q conceived respectively as correlation of tests and correlation of persons, gives us a 'statistics of the individual.' As already noted, R and Q techniques both presuppose a minimum of two persons, and the factor analytic extension requires a good many more. He criticizes Q on the grounds that:

- (1) It avoids differences in means.
- (2) It fails to show changes in intensity of traits only.
- (3) Since items are only in comparative positions, mental health or adjustment or improvement is only a change in approximation in Real and Ideal Selves.

- (4) The Ideal sort for some subjects may represent "like to be," for others "should be," and for still others a blend of these two.
- (5) In Q, as in any personality inventory, one must consider the responses to the statements not as interpretations of fact, but as expressions of the subject in terms of what the test situation resembles for him.

The initial criticism of Mowrer seems either to ignore or discount studies such as the one by Stephenson (180, p. 255-268). In this study on Bogert the patient executed fifteen sorts on himself, and Stephenson extracted and analyzed three orders of factors.

The first three criticisms center in the fact that Q measures relative, rather than absolute, values. This is true, but as the observations of other critics, to be presented later, will show, the absolute scale has shortcomings of its own.

The significance of the sorts to the subject can be clarified by explicit instructions or by requiring separate sorts for each of these overlapping areas.

Point five is only an observation, since no one would assert that Q or any other statement-preference test is anything more than a ranking of attitudes and opinions.

2. Absolute rating scales.

Numerous studies were conducted in which the judges and subjects rated themselves and others on an absolute, rather than on a relative, scale. They ranged from simple yes or no types of construction to six-

point scales. The early critical observations pointed to the nature of the error made by the judges in rating the subjects.

Bronfenbrenner and Dempsey (29) concluded that there were four kinds of errors made by judges:

- (1) Error in estimating the level at which the other person is responding, i.e., rating himself consistently high or low.
- (2) Error of estimating the range within which the other person may express himself, e.g., from four to six on a ten-point scale.
- (3) Errors in estimating differences among persons, e.g., is A stronger than B on this trait.
- (4) Errors in estimating differences within persons, e.g., the other person is high on trait (a), low on trait (b), and medium on neither.

Numerous other methodological studies and criticisms came from a group at the University of Illinois. Osgood and Suci (151) developed a method for analysis of personality profiles in terms of D, a measure of distance explained below. Somewhat independently, Cronbach and Gleser (49) became interested in this measure and extended the applications of D to a variety of methods for assessing similarity between personality profiles. They found that previous attempts to measure similarity encountered numerous difficulties. They offer the following explanations for the occurrence of these problems:

- (1) Similarity has been regarded as a general quality, instead of referring to the specific dimensions to be compared.

- (2) Over-all similarity ignores differences between persons in specific area.
- (3) Absolute interpretation of an index of similarity such as a correlation is unwarranted because factors other than the accuracy of perception may account for the similarity.
- (4) The scale units may not be comparable. The psychological distance between any two items in a Q sort may not be the same.

As an improved measuring technique they propose D, which is equal to the square root of the sum of the differences between any two persons on the separate items squared. They

. . . conceive of the tests as coordinates and each person's score set as a point in the test space. Then distances between points, computed by the D measure, are an index of similarity between score sets." (151, p. 472)

While this measure is comparable to Q they believe D is superior on the grounds that the difference between profiles is not taken into account in Q.

In his recent study, Fiedler (69) used D to measure the extent of the Assumed Similarity between his subjects and found this methodology made large scale computations more workable.

Gage and Cronbach (86) presented an extensive summary of the methodological problems that have confronted them and other researchers in the area of personal perception. They distinguished four major components in the experimental situation: Judge, Other, Input, Outcome. The agent and activities associated with some of these compo-

nents are discussed.

The Judge is the person whom the experimenter measures. The Judge observes and rates or describes the Other. In this process, two factors must be distinguished: (a) The degree of acquaintance of the Judge with the Other. The Judge may be well acquainted or only slightly acquainted. (b) The degree of extrapolation; that is, the extent to which the Judge must depart from immediate observations in his rating of the Other and draw on experience, and develop new knowledge from inference.

The Other is the person whom the Judge rates. In asking the Judge to predict, it is important to consider what he is predicting about Others: (a) persons in general, (b) a particular category of persons, (c) a particular group, (d) an individual, or (e) an individual on a particular occasion.

Accuracy of Judge's rating of Other can be realistically assessed only when (x) the Judge's Real Self, (y) the Judge's Prediction of Other, and (z) the Other's Real Self are compared. Comparing these ratings, (y) with (z) is termed Accuracy; (x) with (z), Real Similarity; (x) with (y), Assumed Similarity. Bender and Hastorf (17) used and extended these concepts as did Fiedler, in the study cited above (82).

Distinguishing stereotyped and differential accuracy, the former might be described as the ability to predict the pooled responses of a given category of persons; the latter, the ability to differentiate between individuals in a specific category. In endeavoring to get at

the ability to predict, experimenter should obtain scores on Judge's (a) ability to predict the next larger class to which the Other belongs, and (b) ability to predict how the Other deviates from the norm of his class.

In measuring differential and stereotyped accuracy, it is recommended:

- (1) If Judge predicts responses of several Others, Experimenter should determine the average Other, and the average of the Judges on that item.
- (2) If Judge predicts for several Others, Experimenter should score each prediction of one Other against the responses of the remaining Other. This constitutes the psychological "chance" basis.
- (3) The conscious and unconscious predictions of the Judge can be compared in this way. The conscious predictions are made when the Judge predicts what the average of the Others will be. The unconscious predictions are estimated by simply averaging the predictions he makes on the several Others.

Additional factors that must be considered are the Judge's feelings toward the Other, positive or negative, and the Judge's implicit personality theory. Some of the above concepts were introduced and many explored more thoroughly by Cronbach (47) in his earlier article.

3. Intermediary keys.

Gage, Leavitt, and Stone (93) discussed extensively the concept of intermediary keys in the analysis of personality profiles. These keys

are to be applied to ratings made on a two to five-point scale. The keys represent statistically measurable equivalents of psychological frames of reference that the Judge uses, often unconsciously, in his rating of the subject.

One group of keys is termed a priori; that is, the Judge tends to respond in these characteristic manners independently of the stimulus situation. They include the following: (1) Assuiescence: tendency to answer questions in affirmative; (2) Favorability: tendency to answer questions in socially acceptable manner; (3) Adjustment: questions answered so as to indicate adjustment.

The second group of keys is obtained by varying instructions to the Judges. They include the following: (4) Real Similarity between Judge and Other contrasted with Assumed Similarity; these terms were defined and used by Gage and Cronbach (86); (5) Stereotype: the extent to which the Judge thinks the Other is typical of a subgroup, such as average person, teacher, or college student; (6) Other as perceived vs. Other's self perception: contrast between the Subject's rating on himself and (a) the Judge's opinion of the Other and (b) the Judge's opinion as to how the Subject sees himself; (7) Modal prediction: (a) for each item the average rating of a group of judges on a single subject, (b) for each item the average rating on several subjects by a single Judge; (8) Modal self-description: the manner in which the majority of Subjects describe themselves.

Suggestions are offered that keys may be appropriately used if they

meet the criteria of (a) internal consistency, (b) independence of other keys, (c) comparisons with additional predictions of others. The authors recommend that only items of Real Dissimilarity in which Judge and Other differ be used in measuring accuracy.

Cronbach (48) again reviews some of the later developments in this area. Although much of his work is still in the exploratory stage he offers the following suggestions for further studies.

- (1) If self perception and perception of another are both compared to some criteria, and if perception of self discriminates, there is no need to go to perceptions of Other.
- (2) Over-all measures of similarity are usually misleading. In actuality there is seldom over-all similarity between profiles. Usually similarity occurs only in certain areas, and these should be studied.
- (3) In analyzing the Judge, experimenter should study either (a) the Judge's perceptions on many Others to obtain the Judge's personal map of the world, or (b) many Judges' perceptions of a single subject.

Fiedler (69) presents a method close to the ultimate in simplicity in interpersonal perception using a type of rating based on the Semantic Differential of Osgood (152). He found a positive relation between performance and ratings on best and least-liked co-workers.

Conclusions. Many of the criticisms stem from the unsuitability of any method so far devised for rating personality and evaluating the

accuracy of its judgments.

If Q is used, there is no way to determine (1) whether all items have the same scale value for the subject, or (2) whether the median item for Judge A is higher or lower or the same as the median item for Judge B, and (3) what is the measure of scatter.

However, if the Judge rates Other on a four to six-point scale, this permits (1) greater freedom of response, since there are no forced choices, and (2) differentiation as to elevation. Nevertheless, if a four-point scale is used on seventy-five to one hundred items, the chance factors become increasingly high and must be considered in evaluating the similarity. In a Q sort, as a rule, there are eight or nine categories.

The Judge, rating on a four to six-point scale, conceivably might not use categories one or six. However, when the Judge uses the Q sort, the experimenter is sure that the Judge will use all the categories. However, in ratings such as those used by Fiedler (69), the use of a six-point scale with twenty-four items makes more discriminative ratings possible. Yet, over a seventy-six to one hundred item sort, the possibility for securing a discriminative rating would seem to be rather slim.

The intermediary keys represent various frames of reference on the part of the Judge in evaluating the subject. The authors regard them at least in part as kinds of errors. The writer considers them more as frames of reference within which the Judge rates the Other. The fea-

ture not previously mentioned is that for some Judges their "evaluations" of others might be almost exclusively categorizeable in terms of these intermediary keys. In other words, their perceptions are a mass of stereotypes and patterns. The only reasons their judgments are "correct" is because the Others meet these stereotypes to some extent in the sorts on themselves.

Furthermore, the concept of "error" in perception is an unfortunate one. For everyday conversation it is suitable, convenient, and meaningful. However, in Fiedler's (69) study, for example, the concept is not used. Rather, a comparison is made between the manner of perception of the successful and less successful members. Emphasis is placed on similarities and differences in perception of co-workers without specific concern as to who was "correct."

Ultimately, for an understanding of these processes an explanation must include a demonstration of how factors a, b, and c in Judge A gave rise to perception of trait x in Subject S as y, and factors a, c, and g in Judge B gave rise to perception of trait x in S as z. More extensive and dystematic experimentation than any conducted up to this time would be required for an explanation of this kind. Currently, personal perception is still in the exploratory phase.

H. Summary. The research in this area has led to the formulation of methodological procedures for further studies more frequently than it has resulted in well validated conclusions. A most certain conclusion is the extreme number of variables which must be controlled or at least evaluated in the

experimental situation.

At least five groups of variables are distinguishable: judge, subject, traits perceived, inferences, descriptions. In many of these five categories the variance within is probably as great as the variance between categories. Furthermore, there are judges who perceive certain traits more accurately in specific subjects under some conditions than under others. Further, results are influenced by the mutual attitudes of like or dislike of judge and subject. Relations between the judges' perceptions of co-workers and their job performance were demonstrated.

Q sorts and rating scales were both used extensively. Each technique has certain advantages and limitations. Neither approach is entirely suitable nor grossly inadequate. A simple approach is recommended. If a judge's rating on himself is related positively to some criterion, it is unnecessary to explore the characteristics of his perception of another person.

The usual criterion for accuracy of perception was how close is the judge's estimate to the subject's perception of himself or the other judges' perception of the subject. The majority of the studies treated the process of personal perception as an act of judgmental accuracy and error rather than in terms of factors influencing the perceptual process itself.

Finally, the problem of accuracy centers around this: If a judge and subject are highly similar in terms of their self sorts, if the judge's prediction is very close to the subject's sort, the question arises: is this perceived similarity or projection? Only if there is low Real

Similarity and high accuracy may we be somewhat sure the prediction is based on perception.

Apparently there is no simple methodological logic for determining whether Real Similarity between judge and subject is actually perceived or projected. However, if the questionnaire has many items, the likelihood of high Real Similarity between subject and judge decreases.

The methodology has been fairly extensively defined, the experimentation generally exploratory, yet somewhat extensive in the area of perception vs. performance. However, the recent formulations on the mental processes occurring between Input and Outtake are rather sketchy. This activity has been treated by the philosophers, but the emphasis has been primarily on broad principles, rather than operational concepts.

The formulation of the present experiment follows.

CHAPTER III

EXPERIMENTAL PROCEDURES

Discussion

In the last chapter the review of the literature disclosed that many areas and aspects of the problem of personal perception have been explored, a rather comprehensive methodology suggested for future research, but perhaps only a few systematic series of experiments conducted. An example would be the project in which the relation was explored between an individual's perception of his co-workers and his on-the-job performance. However, in most areas the issues are more clearly defined than is the experimental work conclusive.

The writer believes that one topic deserving of more attention and more extensive exploration is the relationship between the Judge's perception of himself and his perception of another. While this question has been explored in general, what is intended here is to uncover the relationship between the structural features of the Judge's perception of himself and his accuracy in perceiving the Subject. However, in view of the stereotyping of perception reported in numerous studies, there will probably be many generalized features of perception which hold for most Judges, rather than numerous patterns unique to the individual Judge. One example of this generalization of patterns would be that the Ideal Selves of the Judges would change less over a two-year period

than the Real Selves.

Furthermore, the manner in which the Judges' perception of a Subject is influenced by their own internal state--if it is so influenced--would probably be best explored if a group of Judges all rated the same Subject. In this way the stimulus is the same for all Judges, and consequently, a relatively similar range of reaction would be expected for each Judge. However, if the Subject interacts with the Judges in some way, he probably would not constitute an identical stimulus perceptually for each individual, but only a highly similar one.

Were photographs or a motion picture used rather than a life situation, the stimulus variability would be more rigorously minimized. But then the entire operation would be unrealistically removed from the day-to-day perceptual processes of the Judge; unless their adult lives be viewed as making projections about movie stars.

In some of the previous studies it was demonstrated that unconscious factors and traits about which the Judges were defensive tended to modify the Judges' ratings of the Subject. If the self ratings of some Judges could be described as defensive, the relation between their self ratings and their ratings on the Subject could be compared with Judges who were less defensive.

In brief, the writer will attempt in the present study to observe the extent to which a group of Judges vary in their perception of a single Subject, and then to determine whether there are patterns of perception true for all, and if not, whether the individual variability is attributable to factors revealed in their perceptions of themselves. The following hypotheses are advanced.

General Hypotheses:

If a group of Judges using a personality inventory make ratings both on themselves and on a Subject who, in turn, rates himself, then the Judges' ratings of the Subject will follow (1) general patterns descriptive of the entire group of Judges, and (2) individual patterns accounting for differences between Judges.

Referring to the general patterns, the hypothesis to be tested is this: The Judges' ratings of the Subject stem primarily from their perceptions of themselves, rather than from their observations of the Subject.

Referring to the individual patterns, the hypothesis to be tested is this: The degree of accuracy with which the individual Judge's ratings of the Subject approximate the Subject's rating of himself is related to certain features found in the Judge's rating of himself.

The hypotheses cited above are not readily susceptible to single statistical tests, but rather are more efficaciously explored with several approaches. Consequently, they are subdivided by specific hypotheses relative to the group and individual patterns.

Specific Hypotheses:

1. Pertaining to group patterns:

- a. The Judges' ratings of the subject approximate their ratings of themselves, rather than the Subject's rating of himself.
- b. The Perceived Similarity between Judge and Subject is greater than the Real Similarity.
- c. The Judges' ratings of the Subject approximate the Judges' Ideal Selves and the Subject's Ideal Self, rather than the Judges' Real Selves and the Subject's Real Self.
- d. The Judges' ratings of the Subject approximate the average of the other Judges' rating of the Subject, rather than those of the Subject on himself.
- e. The Judges' ratings on themselves in terms of the way they believe the Subject would rate them approximate first the Judges' Social Selves, next their Real Selves, and last their Ideal Selves.

2. Pertaining to individual patterns:

- a. As a Judge's Real Self more closely approximates his Ideal Self, the Judge's rating of the Subject more closely approximates the Subject's rating on himself.
- b. As the Judge's ratings on himself become more stereotyped, the Judge's ratings of the Subject decrease in accuracy.
- c. As certain logical pairs among the Judge's ratings on himself increase in similarity, the Judge's accuracy in rating the Subject increases.
- d. The most accurate and least accurate Judges differ from one another in both the structuring and content of the items they use in rating themselves.

Discussion of terms used

In the above hypotheses the term Judge refers to the individual whose processes are studied. The Subject is the individual perceived, rated, or described. The process of evaluation in the hypotheses is referred to as rating. The term personal perception is used in the literature to refer to perceptions of other persons. Perception as used in this study is synonymous with observation.

A distinction is made between the processes of judgment and projection. Both are related to perception in some way. The definition of perception in the conceptual sense offered by Verplanck (200a, p. 23) reads:

. . . a hypothetical internal event of unspecified nature controlled largely by external stimulation (but sometimes also by state variables such as habit and drive). Such events are often treated as though they were the true controllers of behavior.

Runes (161a, p. 228) presents this definition of the product of perception, the percept:

. . . The percept or vehicle of perception consists of actually given sense qualities supplemented by imaginatively supplied qualities

which on the basis of earlier experience are ascribed to the perceived object.

In brief, in terms of the topics as discussed here, the percept is a fusion of the data from the Judge himself and from the Subject. If the data from the Subject predominates, the process may be termed judgment. If the data from the Judge predominates, the process may be termed projection.

Various other terms are used in a specific way in this treatment. Real Similarity refers to the comparison between the Judge's sort on himself and the corresponding sort of the Subject on himself. Perceived Similarity is the relation between the Judge's Real Self and his rating on the Subject. Multiple ratings refer to the several sorts performed by both the Judges and the Subject. The experimental procedure used to test the hypotheses follows.

Experimental Procedure

Subjects

Nineteen students from a general psychology class in the Day Arts division of a mid-west university, together with their instructor, participated in this experiment. Although five other members of the class were asked to complete the experiment, their work could not be used because a preliminary inspection disclosed that it was either incomplete or done carelessly.

The participants were freshmen and sophomores. In general, they were from the upper middle class socio-economic background. Fourteen were males; five were females. The age range extended from 17.9 to 24.5 with a mean of 19.1 and a median of 19.2.

Undergraduates were used because the intention of this study in part was to explore the perceptual and evaluative processes of novices, rather than experts. Their instructor was used as Subject because the students had approximately the same opportunities and length of time to become acquainted with him and to observe him. Throughout the presentation the students are termed Judges; the instructor, Subject.

Materials

Q sort. To permit an objective estimate of the interpersonal perceptions of the Judges, the Q sort composed by Fiedler (71) from statements originally written by Murray (202, p. 142-242) used used. This Q sort consists of a series of seventy-six statements. The content of each statement represents an attitude, a personality trait, or a pattern of behavior. Unlike the sort used by Rogers and Dymond (160) these items are less obviously descriptive of either mental health or maladjustment, but instead present a set of personality traits. This particular feature is discussed further in the presentation of results. The statements are reproduced in Appendix II.

Record Forms. The Judges were instructed to record their pattern of responses on special forms. Six forms were given to each Judge, one for each of the sorts. A copy of this form appears in Appendix III.

Instruction Page. Although the instructions were given to the group verbally, with blackboard illustrations to aid clarification, an instruction sheet was also given which summarized the purpose of the sort and the procedure to be followed. A copy appears in Appendix IV.

Post Sort Questionnaire. After completing the six sorts, the Judges

were asked to fill out a questionnaire. The questions were concerned with the amount of time spent, which sorts were found most difficult, which most similar, and the Judges' reaction to the task. This form is reproduced in Appendix V.

Instructions to the Judges. The instructions as mentioned above were first delivered verbally accompanied by illustrations. The general purpose of the experiment was explained in order to motivate them to perform the task thoughtfully and carefully. The verbal instructions were similar to the written instructions. They are presented in Appendix VI. Concerning the instructions, in brief, the Judges were asked to assign each statement to one of nine categories. A given number of statements were to be placed in each group. The number of statements to be assigned to each of the nine categories is listed below and approximates a normal distribution.

Group	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>VI</u>	<u>VII</u>	<u>VIII</u>	<u>IX</u>
Number	1	4	7	13	26	13	7	4	1

These nine categories represent a continuum ranging from the statement least descriptive in category I to the statement most descriptive in category IX. The neutral statements go into category V.

The students were asked to do six separate sorts; three on themselves, two on the instructor, and one on the relation of the instructor to themselves. The instructor completed only the three sorts on himself. Each sort was to be recorded on a separate form. These sorts are described below. The abbreviations listed with each sort will be used throughout the remainder of this dissertation to identify the sorts. These sorts are:

J-1. Social Self.

In this sort the Judge rates himself as he believes other people perceive him. In dealing with other people an individual might feel that most people understand certain aspects of his life and personality much the same as he does. However, people might perceive or evaluate certain characteristics in a distorted manner and ignore other traits. Consequently, the Social Self is distinguished from the following sort.

J-2. Real Self.

This sort represents the way the person perceives himself. He describes himself as he believes he is, regardless of how other people have described him in the past, or the current opinions of him he believes they hold. Nor does he present himself as he would like to be; this set of concepts is called for in the next sort.

J-3. Ideal Self.

In this sort he described himself as he would like to be. While noting previously what traits he actually possessed, he might feel that some or many of these characteristics are undesitable in respect to their relative strength or weakness in his personality. Consequently, this sort describes the manner of man he would like to be.

J-4. Judge's perception of Subject.

This sort represents the way the Judge sees the Subject. Now in evaluating another person, an individual may concentrate on the traits and characteristics of the other person as the observer sees them. The Judge answers these items in terms of the way he sees the Subject, rather than the

way he believes the Subject might see himself.

J-5. Judge's interpretation of Subject's self perception.

In this task the Judge infers or estimates how the Subject perceives himself. This sort requires the Judge to enter the Subject's frame of reference. This evaluation is more complex, as it involves the evaluation of the Subject as the Subject perceives himself.

J-6. Judge's perception of the way the Subject perceives him.

The Judge sorts the statements as he believes the Subject would rate him. This description probably calls for the most complex perceptual pattern of the set, because the Judge is asked to perceive through two frames of reference. First, his perception of the Subject, and secondly, how the Subject's perceptual pattern influences his evaluation of him, the Judge.

The Subject rates himself in only the first three sorts referred to as Social Self (J-1), Real Self (J-2), and Ideal Self (J-3).

Recording the data.

Each statement of the Q sort has been assigned a number. The number of each statement was recorded on the record form in the proper categories: I, II, etc. A separate record sheet was used for each sorting: Real, Ideal, etc.

The post sort questionnaire was used to determine the amount of care exercised in sorting the statements, the extent of the student's ego involvement. This was inferred from questions concerning the amount of time spent on the sort, the sorts found most difficult, and the sorts thought to be most

similar. Marked deviations from the expected patterns in these answers cast doubt on the validity of the particular student's record.

Furthermore, after the students had completed their sorts, the records were inspected. Sorts done in a careless, incorrect, or arbitrary manner were excluded from the study. The Q sorts that complied with instructions were used. The data was placed on IBM cards for machine calculations of product moment correlations. The presentation of the data follows.

CHAPTER IV

PRESENTATION AND ANALYSIS OF THE DATA

In this section the following plan will be followed in presenting the results of this experiment.

- A. General analysis of the data. The methods of computing the data and the general characteristics will be discussed. This material applies to all of the hypotheses in some way.
- B. Analysis of the specific hypotheses. Each of the specific hypotheses are put to statistical tests and the data arranged. In each of these sections this plan follows:
 1. Restatement of the specific hypothesis.
 2. Discussion, description, and definition of terms if necessary.
 3. Presentation in tabular form of the results of the statistical treatment. This will include:
 - a. Ranking of the correlations.
 - b. Computation of the average r for each set.
 - c. Ranking of the correlations and the computations of ranks between sets of correlations.
 - d. Computation of chi square or the Freeman test for assessing the difference between groups of correlations.
 4. Discussion and conclusion.

A. General analysis of the data.

First, the six sorts of each Judge and the three sorts of the Subject were intercorrelated. This procedure yielded thirty-six Pearson product moment correlations for each of the nineteen subjects. These correlations appear in the tables of Appendices VII and VIII. Each Judge is assigned a code letter. The data are arranged so that the high correlations are grouped toward the top left of the page. For each pair the average r is presented. Average r is not computed directly. The separated correlations are translated into z scores, which are then summed and averaged. The average z is translated into an average r . Throughout the study, all references to average r have been computed in this way.

As might be expected, the high correlations are between the various sorts the Judges made on themselves and the sorts of the Subject on himself. The lowest correlations are comparisons between the sorts of the Subject and those of the Judge.

The highest intercorrelations are between the Judges' rating on the Subject and the Judges' perception of the way the Subject rates himself (J-4) (J-5). This is a measure of what Gage (89) referred to as the difference between perceiving the Other (J-4) and assuming the role of the Other (J-5). The range of correlations between 1.00 and .15, with an average r of .80, seems to indicate that most of the Judges either failed to perceive a difference between these two modes of response or actually saw the Subject as rating himself much as they would rate him.

On the other hand, the correlations between the Judges' Real Selves

and the Subject's Ideal Self (S-3) are the lowest. The average r between (S-3) and (J-2) is $-.01$. This is the same as the average r between (J-4) (S-2) and (J-5) (S-2). Because of the closeness of these measures for most of the Judges, the (J-5) sort will be compared with the other sorts rather than both (J-4) and (J-5).

The instructions to the Judges or (J-5) were to rate the Subject as they thought he would rate himself. This (J-5) sort should be the complement of the Subject's (S-2) or Real Self. Consequently, (J-5) is used. The analysis of the specific hypotheses follows.

B. Analysis of the specific hypotheses.

1. Relative to group patterns.

- a. Hypothesis: The Judges' ratings of the Subject approximate their ratings of themselves, rather than the Subject's rating of himself.

One of the fundamental purposes of this study is to determine what is the perceptual core around which the Judge makes his ratings on the Subject. In this experiment a variety of perceptual frames of reference were elicited from each Judge and comparable ones from the Subject. These basic frames of reference are (a) the Judges' rating of themselves, (b) the Judges' ratings of the Subject, and (c) the Subject's rating of himself.

The first hypothesis states that the Judges' rating of himself is the principal framework used in his rating of the Subject. One way of checking this hypothesis is a three-way comparison between the ratings of the individual Judges on themselves (J-2), the Sub-

ject on himself (S-2), and the Judge on the Subject (J-5). If the Judges' frame of reference is the Subject, then the correlations between the Judge's rating of himself (J-3) and his perception of the Subject (J-5) will be much lower than the correlations between the Judge's ratings of the Subject (J-5) and the Subject's ratings of himself (S-2).

The results are presented in Table I, p. 86. The comparisons are made between the Real and Ideal Selves of the Judges (J-2) (J-3), the Real and Ideal Selves of the Subject (S-2) (S-3), and the Subject's perception of himself (S-2). For simplicity of identification the columns are assigned capital letters and the Judges are each given a code letter. In column G the Judges are ranked in terms of the magnitude of r between their Ideal Selves (J-3) and their perception of the Subject (J-5). The correlations for the other comparisons appear in columns F, A, and B. Below the column of correlations, the range of correlations are stated, and the average z and r , computed by the procedure mentioned above.

Both the range of correlations and the average r 's suggest that the correlations for each Judge proceed in a descending order from column G through F and A to column B. To subject this to a more objective analysis the Freeman Test, as presented by Siegel (1971) is used.

To run this test the correlations are ranked across the rows, or for each Judge, from one through four. The ranks in the columns

TABLE I

JUDGES' PERCEPTIONS OF SUBJECT COMPARED WITH JUDGES'
AND SUBJECT'S PERCEPTIONS OF THEMSELVES

	G		F		A		B	
Judge	(J-5) (J-3)	Rank	(J-5) (J-2)	Rank	(J-5) (S-3)	Rank	(J-5) (S-2)	Rank
C	.83	1	.58	2	.32	3	-.06	4
E	.68	1	.59	2	.30	3	-.01	4
T	.68	1	.64	2	.50	3	.01	4
V	.55	1	.24	3	.32	2	-.10	4
A	.54	1	.32	2	.16	3	-.13	4
I	.54	1	.23	3	.35	2	-.20	4
B	.51	1	.34	2	.14	3	-.20	4
L	.51	1	.31	3	.37	2	.06	4
M	.51	1	.24	3	.32	2	-.10	4
R	.51	1	.45	2	.16	3	-.13	4
W	.48	1	.26	2	.24	3	-.08	4
P	.45	1	.05	3	.35	2	-.31	4
K	.41	1.5	.41	1.5	.19	3	.07	4
H	.40	2	.44	1	.38	3	.00	4
N	.40	1	.37	2	.33	3	-.12	4
S	.38	1	-.02	3	.12	2	-.05	4
D	.37	1	.10	2	.09	3	-.18	4
F	.36	1	.23	2	.10	3	-.03	4
Q	.29	1	.24	2	.08	3	-.15	4
Range from to	.85 .29		.64 -.02		.50 .08		.12 -.31	
Avg. z	.56		.34		.26		-.08	
Avg. r	.51		.33		.26		-.08	
Sum		20.5		42.5		51		76

Freeman Test: chi square = 45.48 (.001)

are then summed. The data is then applied to the formula presented in Appendix IX. A chi-square measure is obtained and checked in the usual tables.

In essence the Freeman Test is a ranking test and is used to check whether one group of scores or correlations tend to be generally higher than another group. The results yield a chi square of 45.48, which is significant well above the .001 per cent level of confidence. A chi square of only 16.268 is needed for this level. This result would be expected, since inspection reveals this pattern deviates for only a few Judges.

In conclusion, apparently the Judges rate the Subject in terms of their Ideal Selves, rather than in terms of their Real Selves. The Judges' idealized ratings come close to the Subject's Ideal Self, but missed his Real Self. As mentioned in the previous chapter, this is the type of rating to be expected of Judges who hold a favorable attitude toward the Subject.

- b. Hypothesis: The Perceived Similarity between Judge and Subject is greater than Real Similarity.

While the Judge's rating of the Subject might approximate the way he rates himself, the question arises: is the Real Similarity between Subject and Judge greater than Assumed or Perceived Similarity?

The results are presented in Table II, p. 88. The hypothesis seems clearly verified on the basis of the average r . Furthermore,

TABLE II

REAL SIMILARITY OF SUBJECT AND JUDGES
 COMPARED WITH PERCEIVED SIMILARITY

Judge	G		L		F		K	
	(J-5) (J-3)	Rank	(J-5) (S-3)	Rank	(J-5) (J-2)	Rank	(J-2) (S-2)	Rank
C	.82	1	.39	3	.58	2	.17	4
E	.68	1	.41	3	.59	2	.25	4
T	.68	1	.48	3	.64	2	.03	4
V	.55	1	.43	2	.24	3	.10	4
A	.54	1	.44	2	.32	3	-.10	4
I	.54	1	.40	2	.23	3	.03	4
B	.51	1	.43	2	.34	3	-.03	4
L	.51	1	.40	2	.31	3	.29	4
M	.51	1.5	.51	1.5	.24	3	.01	4
R	.51	1	.39	3	.45	2	.11	4
W	.48	1	.29	2	.26	3	.04	4
P	.45	1	.31	2	.05	3	-.04	4
K	.41	1.5	.36	3	.41	1.5	.24	4
H	.40	2	.31	3	.44	1	.09	4
N	.40	1	.34	3	.37	2	-.02	4
S	.38	2	.40	1	-.02	4	-.01	3
D	.37	1	.33	2	.10	4	.22	3
F	.36	1.5	.36	1.5	.23	3	.08	4
G	.29	2	.33	1	.24	3	.20	4
Range								
from	.83		.51		.64		.29	
to	.29		.29		-.02		-.10	
Avg. z								
Avg. r	.56		.41		.34		.08	
	.51		.39		.33		.08	
23.5			42			50.5		74

Freeman Test: chi square = 37.20 (.001)

the Freeman Test indicates that this pattern represents an actual trend. The chi square of 37.20 is well in excess of the 16.268 necessary for significance at the .001 per cent level. The results, then, indicate the highest correlations between the Judges' Ideal Selves (J-3) and their ratings of the Subject (J-5), next, between the Ideal Selves of the Subject (S-3) and Judge (J-3), then, the Judges' Real Selves and their ratings of the Subject (J-5), and finally, the Real Selves of Judges (J-2) and Subject (S-2).

This hypothesis seems to be verified. The Perceived Similarity between Judge and Subject is greater than the Real Similarity. Furthermore, there is greater Perceived Similarity between Ideal Selves than between Real Selves. However, the Real Similarity between Ideal Selves is greater than Perceived Similarity between the Judges' Real Selves (J-2) and their perception of the Subject (J-5). The Ideal Self of the Judge is beginning to emerge as the focal point around which the Subject is perceived, at least for most of the Judges. However, the Real Self is also used as a basis.

- o. Hypothesis: The Judges' ratings of the Subject approximate the Judges' Ideal Selves and the Subject's Ideal Self, rather than the Judges' Real Selves and the Subject's Real Self.

After concluding that the Judges' ratings of the Subject (J-5) approximate their ratings of themselves (J-2), rather than the Subject's rating of himself and that Perceived Similarity is higher than Real Similarity, another test was used to check the degree of

similarity between the Judges' Real (J-2) and Ideal Selves (J-3) and their ratings of the Subject (J-5). The purpose of this test is to determine which frame of reference is dominant in the Judge in rating the Subject.

Using partial correlations, the relation between any two sorts may be computed with the third held constant. This procedure yields a correlation between the other two factors independent of the influence of the third. In this analysis there are four groups of partial correlations computed as follows.

1. Holding the Judges' Real Selves constant (J-2), the partial correlations are computed between the Subject's Real Self (S-2) and the Judges' ratings of the Subject (J-5). The purpose of running this partial correlation is to determine what the Judges' ratings of the Subject (J-5) would be without the influence of their Real Selves (J-2), or with the influence of their Real Selves held constant.

The results are presented in Table III, p. 91. The average correlation and the average partial correlations for the various sorts are presented. The average correlations are computed according to the procedure mentioned previously. The formula used for computing partial correlations appears in Appendix IX. In the first set of partial correlations, with the Judges' Real Selves (J-2) held constant, the average partial correlation between the Judges' ratings of the Subject (J-5)

TABLE III

PARTIAL CORRELATIONS BETWEEN VARIOUS COMBINATIONS
OF REAL, IDEAL, AND PERCEIVED SORTS

Diagram of Sorts	Correlation Variables			Correlations	
	1	2	3	Avg. r	r ² _{12.3}
1. (S-2) ₂ (<u>J-2</u>) ₃ (J-5) ₁	12	(J-5)	(S-2)	.01	
	13	(J-5)	(J-2)	.33	
	23	(S-2)	(J-2)	.09	
	12.3	(J-5)	(S-2) . (J-2)		-.12
2. (S-3) ₂ (<u>J-2</u>) ₃ (J-5) ₁	12	(J-5)	(S-3)	.25	
	13	(J-5)	(J-2)	.33	
	23	(S-3)	(J-2)	.21	
	12.3	(J-5)	(S-3) . (J-2)		.21
3. (S-2) ₂ (<u>J-3</u>) ₃ (J-5) ₂	12	(J-5)	(S-2)	-.01	
	13	(J-5)	(J-3)	.51	
	23	(S-2)	(J-3)	-.01	
	12.3	(J-5)	(S-2) . (J-3)		-.04
4. (S-3) ₂ (<u>J-3</u>) ₃ (J-5) ₁	12	(J-5)	(S-3)	.25	
	13	(J-5)	(J-3)	.51	
	23	(S-3)	(J-3)	.39	
	12.3	(J-5)	(S-3) . (J-3)		.08

N.B. Sorts underlined are held constant.

and the Subject's Real Self (S-2) is $-.12$. The average unpartialled correlation between these variables (J-5) (S-2) is $-.01$.

These results indicate not only that the Judges rate the Subject (J-5) in a way very different from the way he rates himself (S-2), but also that the low average negative correlation ($-.01$) stems from the projection of the Judges' Real Selves (J-2) in their rating of the Subject (J-5). Independently of the contribution of the Judges' Real Selves (J-2), their ratings of the Subject are generally lower ($-.12$).

2. Again holding the Judges' Real Selves (J-2) constant, the correlation between the Judges' Real Selves (J-5) and the Subject's Ideal Self (S-3) yields an average partial correlation of $.21$, in contrast to the average unpartialled correlation of $.25$, as presented in Table III.

These results indicate that the Judges' ratings of the Subject (J-5) correspond much more with his Ideal Self (S-3) than his Real Self (S-2). The average correlations respectively were $.25$ and $-.01$. However, the average partial correlation of $.21$ is slightly lower and indicates again that the projection of the Judges' Real Selves (J-2) slightly increases the average correlation between the Judges' ratings of the Subject (J-5) and the Subject's Ideal Self. Consequently, the

Judges' ratings of the Subject (J-5) are largely in terms of his Ideal Self (S-3), rather than his Real Self (S-2).

3. This time the Judge's Ideal Self is held constant and a comparison is made between the Judges' ratings of the Subject (J-5) and the Subject's Real Self (S-2). The results indicate that the average partial correlation ($-.04$) is slightly lower than the average unpartialled correlation ($-.01$).

Comparing these results with those of paragraph #1, the average partial correlation is slightly lower for (S-2) (J-5) when the Judge's Real Self (J-2) is held constant than when his Ideal Self (J-3) is held constant. The average partial correlations are respectively $-.12$ and $-.04$. This again indicates that the Judge's Ideal Self (J-3) contributes some slight positive variance.

4. Again holding the Judges' Ideal Selves (J-3) constant, the correlations between Judges' ratings on the Subject (J-5) and the Subject's Ideal Self (S-3) are partialled out. The average unpartialled correlation between (J-5) and (S-3) is $.25$, while the average partialled correlation drops to $.08$. This indicates that much of the variance of the $.25$ correlation stems from the Judges' Ideal Selves (J-3) in contrast to paragraph #2 when (S-3) (J-5) correlation is little influenced by the Judges' Real Selves held constant.

In summary, the Judges' ratings of the Subject (J-5)

stems primarily from their Ideal Selves (J-3). This frame of reference is more pronounced than their Real Selves (J-2), although the latter make some slight contribution to the (J-5) sort. The Judges' ratings on Subject (J-5) are positively related to the Subject's Ideal Self (S-3), but negatively to his Real Self (S-2).

- d. Hypothesis: The Judges' ratings of the Subject approximate average of the other Judges' ratings of the Subject, rather than those of the Subject on himself.

As was explained in detail in Appendix IX, an average sort was constructed based on the Judges' ratings of the Subject (J-5). To avoid the contamination that would ensue if the individual Judge's sort (J-5) were compared with an average which included his own, a slight modification was used. Each Judge's sort (J-5) was compared with the average of all the other Judges' (J-5) sorts. Since there are actually nineteen different (J-5) average sorts and since each sort excludes one of the Judges, the sort is described as a (J-5) average minus one sort and abbreviated as (J-5 avg. -1). The correlations between the average sorts on (J-5) and the (J-5 avg. -1) sorts are very high. They range from .94 to .99, with an average of .97.

In Table IV, p. 95 the results are presented showing a comparison between the sorts of the Judges on the Subject (J-5) with the average of the other Judges' ratings on the Subject (J-5 avg. -1), the Judges' Real Selves (J-2), and the Subject's Real (S-2) and

TABLE IV

JUDGES' PERCEPTIONS OF SUBJECT COMPARED WITH OTHER
JUDGES' PERCEPTIONS OF SUBJECT

	G		V		A		B	
Judge	(J-5) (J-3)	Rank	(J-5) (J-5avg.)	Rank	(J-5) (S-3)	Rank	(J-5) (J-2)	Rank
T	.68	1.5	.68	1.5	.50	3	.01	4
B	.51	2	.59	1	.14	3	-.01	4
E	.68	1	.58	2	.30	3	-.06	4
I	.54	2	.58	1	.35	3	-.13	4
K	.41	2	.55	1	.19	3	.00	4
A	.54	1.5	.54	1.5	.16	3	.07	4
R	.51	2	.54	1	.16	3	.12	4
M	.51	2	.53	1	.32	3	-.20	4
C	.83	1	.50	2	.32	3	-.13	4
N	.40	2	.49	1	.33	3	.06	4
P	.54	1	.48	2	.35	3	-.08	4
L	.51	1	.44	2	.37	3	-.15	4
S	.38	2	.43	1	.12	3	-.10	4
D	.37	1	.35	2	.09	3	.03	4
W	.48	1	.34	2	.24	3	.03	4
H	.40	1	.31	3	.38	2	-.20	4
G	.29	2	.30	1	.08	3	-.18	4
V	.55	1	.29	3	.32	2	-.31	4
F	.36	1	.12	2	.10	3	-.08	4
Range from to	.83 .29		.68 .12		.50 .08		.12 -.31	
Avg. z	.56		.50		.26		-.08	
Avg. r	.51		.48		.26		-.08	
Sum		28		31		55		76

Freeman Test; chi square = 47.85 (.001)

Ideal (S-3) Selves. These results indicate that the Judges' ratings of the Subject resemble most the Judges' Ideal Selves (J-3); next, the average of the other Judges' ratings on the Subject (J-5 avg. -1); then the Subject's Ideal Self (S-3); and finally, the Subject's Real Self (S-2). This trend is to be expected because of the high correlations between the Judges' Ideal Selves (J-3) and their ratings on the Subject (J-5).

Furthermore, the Freeman Test yields a chi square of 47.85, significant well above the .001 level. The high significance of the Freeman Test indicates that there is a marked difference between the various sorts for the individual Judge.

- e. Hypothesis: The Judges' ratings on themselves in terms of the way they believe the Subject would rate them approximate first the Judges' Social Selves, next their Real Selves, and last their Ideal Selves.

The above groupings of these correlations indicate certain assumptions about the Judges' opinions of the Subject's perception of them. If (J-6) corresponds closely with (J-1), the Judge believes that the Subject rates him the same as would most other people. In this case either the Judge perceives no difference between the way he is perceived by the Subject and by other people or he does not believe that various individuals would perceive him differently.

If the (J-6) rating is most like the Real Self of the Judge (J-2), this indicates that the Judge believes the Subject perceives

him more accurately than do other people. The Subject sees through some appearances and perceives him much as the Judge perceives himself.

If the (J-6) resembles the Judges' Ideal Self (J-3), this indicates that the Subject, in the opinion of the Judge, perceives the Judge as the Judge would like to be, ignoring his less desirable characteristics.

The (J-5) sort is included in the comparison in order to distinguish the difference between what is predominantly the Judge's perception of the Subject's self concept (J-5) and the Subject's perception of the Judge as perceived by the Judge (J-6).

In Table V, p. 98, the Real, Ideal, and Social Selves of the Judges and the Judges' ratings of the Subject's self-perception are compared with the Judges' opinions of the way they are perceived by the Subject. The results indicate that (J-6) correlates most with the Judges' Real Selves (J-2), next with the Social Self (J-1), then the Ideal Self (J-3), and last with the Judges' rating of the Subject (J-5). The Freeman Test yields a chi square of 12.35, in excess of the 11.345 required to be significant at the .01 level of confidence. This indicates that there are significant differences between these four modes of perception.

These results indicate that most of the Judges believe the Subject sees them more as they see themselves (J-2) than as other people view them (J-1). Perhaps they feel that the Subject sees

TABLE V
CORRELATIONS BETWEEN THE JUDGES' (J-6) RATING
COMPARED WITH JUDGES' OTHER SORTS

	R		S		T		V	
Judge	(J-2) (J-6)	Rank	(J-1) (J-6)	Rank	(J-3) (J-6)	Rank	(J-5) (J-6)	Rank
K	.84	2	.85	1	.81	3	.57	4
C	.59	3.5	.59	3.5	.76	1	.67	2
A	.95	2	1.00	1	.69	3	.30	4
T	.43	2	.36	4	.39	3	.48	1
N	.41	1	.29	3	.35	2	.20	4
R	.61	1	.49	2	.39	4	.44	3
L	.40	1	.18	3	.32	2	.15	4
V	.46	4	1.00	1	.58	2	.51	3
H	.41	1	.32	2	.21	4	.23	3
E	.38	2	.79	1	.11	4	.22	3
G	.48	2	.47	3.5	.47	3.5	.64	1
B	.41	2	.43	1	.33	3	.15	4
I	.32	1	.27	2	.15	4	.26	3
W	.26	1	.23	2	.12	3	-.05	4
D	.42	1	-.02	2	-.12	4	-.06	3
F	.04	2	.25	1	-.09	3	-.23	4
S	.12	2	.11	3	.38	1	.08	4
M	.07	1	-.13	2	-.19	3	-.20	4
P	.19	2	.17	1	.09	3	-.01	4
Range from to	.95 .04		1.00 -.13		.81 -.19		.67 -.23	
Avg. z	.49		.75		.34		.26	
Avg. r	.45		.64		.33		.25	
Sum	33.5		40		55.5		61	

Freeman Test: chi square = 12.35 (.01)

through their facade and perceives them more accurately than do other people. The low correlation with their Ideal sorts indicates that the Judges do not believe that he holds an idealized picture of them at the expense of realistic accuracy. Furthermore, in terms of the other observations of the Judges' ratings of the Subject, the Judges' generally idealized view of the Subject is evidently not believed to be reciprocated by the Subject. The Subject's observations are rather cold and analytical, according to most of the Judges.

The above five hypotheses were related to the pattern of perception descriptive of the Judges as a group. The second group of hypotheses are more concerned with the individual differences among the Judges.

2. Pertaining to individual patterns.

- a. Hypothesis: As a Judge's Real Self more closely approximates his Ideal Self, the Judge's rating of the Subject more closely approximates the Subject's rating of himself. In abbreviated form this would be: If (J-2) (J-3) is high, then (J-5) (S-2) is high.

In the recent study of Rogers and Dymond (160) they note that before counseling there was a marked discrepancy for most of their clients between their real and ideal selves. After counseling this gap was narrowed. They concluded that high divergence between real and ideal selves is indicative of maladjustment. However, what is also noted is that some individuals, the least well-adjusted, maintain a type of defensiveness in which they refuse to admit differences of any serious nature between their real and Ideal selves.

Consequently, they show a very high relation between the two. Now in an earlier study Rogers (159) maintained that the maladjusted person is unable to perceive another individual accurately. He tends to perceive others as either fortifying or threatening his defenses. Consequently, the more accurate ratings should be made by the better adjusted.

In Table VI, p. 101 a group of rho correlations between various sorts are presented. These correlations were obtained in the following way. The Pearson product moment correlations between any two sorts were arranged in order of magnitude. Each correlation was then assigned a rank order number from one through nineteen. As in Table VI, the rho of .69 for columns C and E represent the correlation between the rankings of (J-2) (J-3) and (J-4) (J-5). In this table rho indicates the extent to which Judges high on one pair of sorts are also high on another pair of sorts. For example, in specific terms the rho answers the question: do Judges with high correlations (r) between their Real and Ideal Selves (J-2) (J-3) also have a high correlation (r) between their ratings on the Subject (J-4) (J-5). Rho then signifies similarities between Judges rather than between modes of perception.

According to the results presented in Table VI, there is a strong positive rho (.59) between the correlations of the Judges' Real (J-2) and Ideal Selves (J-3) and the correlations of their ratings of the Subject (J-5) and the Subject's Real Self (S-2).

TABLE VI
RANK ORDER CORRELATIONS BETWEEN
VARIOUS SORTS

	C	E	P	D	B	A
	(J-2) (J-3)	(J-4) (J-5)	(J-5) (J-5avg.)	(J-1) (J-6)	(J-5) (S-2)	(J-5) (S-3)
C		.39	.52	.59	.59	.23
E	.69		.61	.62	.16	.19
P	.52	.61		.25	.11	.34
D	.59	.62	.25		.10	-.06
B	.59	.16	.11	.10		.27
A	.23	.19	.34	-.06	.27	

Note: .564 sig. at .01 level
.399 sig. at .05 level

This indicates that Judges with a high similarity between their Real and Ideal sorts rate the Subject more accurately than those with a low Real-Ideal similarity. This rho is significant at the .01 level of confidence since, as explained in Appendix IX, this figure is above .564. However, even though the Ideal sort of the Subject (S-3) correlates higher with the Judges' rating of the Subject (J-5), the Real-Ideal correlation is not related to accuracy of

prediction(J-5) of the Subject's Ideal sort (S-3). This is indicated by the rho of .23 which is below the .399 necessary for significance at the .05 level.

According to the results, the hypothesis is verified. The accurate Judges of the Subject have a high correlation between their Real and Ideal Selves. However, this does not apply if the ratings they make on the Subject are compared with the Subject's Ideal Self (S-3), even though the relation between their ratings of the Subject (J-5) and his Ideal Self (S-3) have a higher correlation.

- b. Hypothesis: As the Judge's ratings on himself becomes more stereotyped, the Judge's ratings of the Subject decrease in accuracy.

As reported in the review of the literature, an individual who is rigid in his pattern of perception will probably be less accurate in his evaluation of another than a person with a more flexible approach. The rigid individual would be expected to see the other person in terms of projection of his own needs or as a stereotype of a class. Consequently, Judges with high intercorrelations between all their ratings on themselves might be regarded as the less differentiating in their perceptual processes.

The average correlation for each Judge was computed in this way. For each Judge the fifteen intercorrelations between his six sorts were transposed to z scores, which were then summed, averaged, and transposed back to average r. These average correlations (average r) were ranked one through nineteen. Then, the rank orders

these average correlations were compared with the rank order of the Judges' ratings of the Subject (J-5), and a rho of .34 was obtained. This was somewhat below the .399 figure necessary for significance at the .05 level of confidence. However, a trend contrary to the hypothesis is indicated. Results indicate that Judges with the least differentiated perceptual patterns tend to make the more accurate ratings on the Subject.

- c. Hypothesis: As certain logical pairs among the Judge's ratings of himself and the Subject tend to increase in similarity, the Judge's accuracy in rating the Subject increases. In terms of the symbols used previously this statement reads: As the intercorrelations of the (J-1) (J-6), the (J-2) (J-3), and the (J-4) (J-5) pairs increase, so also will the (J-5) (S-2) correlations increase.

Again referring to Table VI, p. 101, several groups of sorts are presented. These were correlated on the basis of logical similarity. For example, (J-2) and (J-3) were correlated because the Real and Ideal Selves of the Judges were expected to be somewhat similar. In like manner, (J-4) and (J-5) were expected to be similar because they were both ratings made on the Subject. Then, (J-1) and (J-6) were combined because it was assumed that the Judges' Social Selves would be rated much the same as their evaluation of the way the Subject would rate them.

Since the Judges were instructed to rate the Subject as he would rate himself, the criterion for accuracy was the Subject's Real Self (S-2). However, since the product moment correlations between (J-5) and (S-2) were low to negative, other criteria were

also used; namely, the Subject's Ideal Self (S-3), and the average of the other Judges' ratings of the Subject ($J-5_{avg} - 1$).

1. The data presented in Table VI, p. 101, revealed at least a low positive correlation between all the variables compared with the exception of the $-.06$ obtained from the (J-5) (S-3) and the (J-1) (J-6) pairs. These generally positive correlations indicate that there is a tendency for the Judges to sort consistently throughout the six sorts.

2. The intercorrelations between these three pairs of the Judges' six sorts (J-1) (J-6), (J-2) (J-3), and (J-4) (J-5) are all high and significant at the $.01$ level. Consequently, there is evident a strong positive tendency for Judges to make ratings with high consistency throughout the logically related sorts. Judges with high product moment correlations between any one of these pairs tend to be high on the other two as well.

3. If a pair of sorts correlates high with the (J-5) (S-2) pair, this correlation indicates that Judges with a high product moment correlation between (J-5) (S-2) tend to have high correlations between the sorts of the other pair. While all pairs reveal at least a low positive correlation between (J-5) (S-2) and all the other pairs, only the rho derived from a comparison with the (J-2) (J-3) pair is significant at the $.01$ level. Consequently, the data reveals that Judges with a higher approximation between their Real and Ideal Selves rate the Subject more

accurately.

It is noteworthy that this Real-Ideal relation has been frequently reported as an index of accuracy of judgment. However, the results at least in part could have stemmed from stereotyping. Nevertheless, in terms of the various pairs of sorts used here, stereotyping would be expected in high (J-4) (J-5) and (J-1) (J-6) correlations. But since there is only a low positive correlation between these latter sorts and accuracy, stereotyping would not be responsible for the relation between accuracy and high Real-Ideal correlations of the Judges.

4. Judges with a high product moment correlation between their ratings of the Subject (J-5) and the average of the other Judges' ratings of the Subject (J-5avg - 1), might be said, according to the terminology of some previous studies, to have a high stereotyped accuracy. Observing the rhos between the two appropriate pairs of sorts tends to substantiate this viewpoint. The (J-2) (J-3) sorts compared with the (J-5) (J-5avg - 1) sorts correlate .52. This is significant at the .05 confidence level but is slightly lower than the (J-2) (J-3) and the (J-5) (S-2) correlation of .59. In contrast, the (J-4) (J-5) pair correlates only .16 with the (J-5) (S-2) pair, but a rho of .61 is obtained when the former pair is compared with the (J-5) (J-5avg - 1). Since similarity in the two ratings on the Subject (J-4) (J-5) would indicate stereotyping, the correlation of this latter pair with the (J-5)

(J-5avg. - 1) sorts indicate that the latter represents the more stereotyped manner of rating the Subject.

Furthermore, although none of the pairs correlate significantly with the (J-5) (S-3) pair, the (J-5) (J-5 avg. - 1) pair yield a rho of .34 approaching significance at the .05 level. The near significant rho between these pairs indicates that the (J-5 avg. - 1) has some features in common with the Subject's Ideal Self.

Finally, the hypothesis as stated is not verified. While there are positive relations among the logical sorts, between the logical sorts and the criterion of accuracy, only the Real-Ideal high correlations serve as an index of accuracy. However, similarity in the Judges' two ratings of the Subject indicates stereotypy and is positively related to the Judges' tendency to rate the Subject as the other Judges rate him.

d. Hypothesis: The most accurate and least accurate Judges differ from one another in both the structure and content of the items they use in rating themselves.

1. Grouping the Judges. First the Judges were separated into quartiles of approximately five members each on the basis of their accuracy in rating the Subject (J-5) (S-2). The five Judges in Q_1 were compared with the five in Q_4 to determine what characteristics distinguish the members of these groups.

Table VII, p. 107 presents some of the more relevant comparisons. According to the data used, the terms "most accurate" and "least accurate" approach nominalism. Accuracy is deter-

TABLE VII

COMPARISONS OF SELECTED CORRELATIONS OF THE MOST
ACCURATE AND LEAST ACCURATE JUDGES

	Judge	J-3 S-3	J-2 S-2	J-1 S-1	J-2 J-3	J-4 J-5	J-1 J-6	J-5 S-2	<u>J-2</u>	J-2 J-5	J-3 J-5
Q ₁	N	.34	-.02	.10	.89	.86	.29	.12	.14	.37	.40
	K	.39	.24	.21	.91	.96	.85	.07	-.03	.41	.41
	L	.40	.29	.26	.66	.52	.18	.06	-.04	.31	.51
	F	.36	.08	-.12	.39	.31	.25	.03	.01	.23	.36
	<u>T</u>	.43	.03	.03	.82	.82	.36	.01	.01	.64	.68
	Avg. r	.39	.12	.09	.73	.70	.38	.06	.02	.39	.47
	Judge	J-3 S-3	J-2 S-2	J-1 S-1	J-2 J-3	J-4 J-5	J-1 J-6	J-5 S-2	<u>J-2</u>	J-2 J-5	J-3 J-5
Q ₄	G	.33	.20	.03	.24	.82	.47	-.15	-.21	.24	.29
	<u>D</u>	.33	.22	-.03	.16	.32	-.02	-.18	-.21	.10	.37
	B	.43	-.03	.14	.62	.62	.43	-.20	-.22	.34	.51
	I	.40	.03	.04	.43	.76	.27	-.20	.28	.23	.54
	P	.31	.01	.12	.07	.40	.17	-.31	-.31	.06	.45
	Avg. r	.38	.09	.06	.27	.58	.26	-.21	-.25	.19	.44

mined by the strength of the (J-5) (S-2) correlation. The most accurate Judges (MAJ) ranged from an r of .12 to .01; the least accurate Judges (LAJ), from -.15 to -.31. The code letters for the Judge if underlined designate a female Judge.

Observing some of the other comparisons, the most accurate (MAJ) do not deviate extensively either in terms of average correlation or range from the least accurate (LAJ) in the majority of sorts. However, aside from the (J-5) (S-2) r 's, the exceptions are (J-2) (J-3) and (J-2) (J-5) correlations.

The Median test (201, p. 435) applied to the (J-2) (J-3) correlations yields a chi square of 3.6, which is below the .05 level. Similarly, the Median test on the (J-2) (J-5) correlations yields the same figures. However, a glance at both sets of correlations reveals that only one correlation of the (MAJ) falls below the median and only one correlation of the (LAJ) falls above the median. Consequently, if significance cannot be obtained from the above comparisons, on no other sorts does there seem to be sufficient variability between (MAJ) and (LAJ) to run the Median test.

The partialled correlations are slightly more negative than the unpartialled correlations for all but one Judge. In Table VII, the partial correlations between (S-2) (J-5) with (J-2) held constant are simply marked by underscoring J-2. These correlations, though low, fall even lower when the Real Self of the Judge is held constant.

Only Judge N increases .02 when the partial correlation is applied. Two remain unchanged, but the others slip in the minus direction from -.10 to -.02.

When the Real (J-2) and Ideal (J-3) sorts of the (MAJ) are compared, the correlations range from .39 to .91, with an average of .73. But when the same sorts of the (IAJ) are compared, they range from -.07 to .62, with an average correlation of .27. While the Median test again does not reach statistical significance, only one of the Judges of the (MAJ) falls below the median, and of the ten Judges, only one of the Judges of the (IAJ) exceeds the median.

More obvious is the Real Self and Subject's perceiving self sort (J-2) (J-5) comparison. The (MAJ) range from .23 to .64, with an average of .39, while the (IAJ) range from .05 to .34, with an average of .19. As to the Median test, the same applies as above.

Consequently, according to these first crude analyses, it is first of all somewhat questionable if the terms "most" and "least accurate" Judges are appropriate, since the (J-5) (J-2) correlations are low and predominantly negative. But if one grants that the distinction can be made between (MAJ) and (IAJ), then they are distinguished on the basis of the correlations between their Real (J-2) and Ideal Selves (J-3) and their Real Selves (J-2) and their ratings of the Subject (J-5).

The data suggest that the correlation between the Real and Ideal Selves is a crucial index of accuracy of rating. However,

only for Judge N do the Real sorts of Judge and Subject correlate lower ($-.02$) than his rating of the Subject ($.12$). Judges generally rating themselves like the Subject (J-2) (S-2) assume a high similarity between themselves and the Subject, approximating their Ideal Selves (J-3) (J-5). Were they asked to predict the Ideal Self of the Subject the judgment correlations would be higher. The Judges' ratings of the Subject (J-5) correlate on the average $.25$ with the Judges' Ideal Selves, as contrasted with an average correlation of $-.01$ between ratings of the Subject (J-5) and Judges' Real Selves (J-2). While the average correlation between Ideal Selves of Subject (S-3) and Judge (J-3) is $.39$, the Subject's Real and Ideal Selves (S-2) (S-3) correlated only $.12$.

Is it possible that the Subject's rating of himself is as erroneous as, by implication at least, are the ratings of the Judges on him? This question cannot be answered on the basis of available data, if it can be answered at all. However, assuming that the Subject's Ideal sort would remain relatively constant, if his Real and Ideal sorts correlated within the ranges of the (MAJ), then the correlations between (J-5) (S-2) would have been somewhat higher. If the good Judge of others is also easy to be judged, and there is a high correlation between Real and Ideal selves in the good judge of others, then conversely the poor judge of others is not easily or accurately judged, and his Real and Ideal Selves are not highly similar. Consequently, since the Subject falls in the latter cate-

gory, the Judges would not be expected to Judge him with high accuracy.

Quite different is the picture presented in Table IV, p. 95, where each Judge's rating of Subject (J-5) was compared with the average ratings of the other Judges of Subject (J-5 avg. - 1). The range of the latter begins where the former ends. The (J-5) (J-5 avg. - 1) correlations extend from .12 to .68, with an average r of -.08, while the (J-5) (S-2) correlations extend from .12 to -.31, with an average r of -.48.

Observing the individual Judges, we notice that only two of the (MAJ) also rank among the first five when compared with the (J-5 avg. - 1); namely, Judges K and T. Similarly, among the (LAJ), only Judge G ranks in the lower quartile. Again, the (J-5) (J-5 avg. - 1) ranks very much like the (J-5) (J-3), with a rho of .60. Consequently, these two ways of assessing accuracy do not yield the same results.

2. Cluster analysis of sorts of (MAJ) and (LAJ). A cluster analysis was made on these sorts according to a method presented by McQuitty (138) and explained in Appendix IX.

This method permits a simple graphic diagramming of the inter-correlations between the various thirty-six correlations of each Judges' six sorts compared with the three sorts from the Subject. A cluster pattern is set up for each Judge to be compared with those of the other Judges.

Immediately, the extent of the individual differences between the nineteen Judges is apparent. Nevertheless, the intercorrelations of most of the Judges fall into three clusters; namely, (1) the Subject, (2) the Judge as rater of the Subject, and (3) the Judge as rater of himself. This is the expected pattern. However, the most salient and in a sense significant feature is the isolation of the Subject's Social (S-1) and Real Selves (S-2) from the cluster of practically every Judge. The only exception is Judge K. Since the correlations are low to negative between the Judges' ratings of the Subject (J-5) and the Subject's Real Self (S-2), these two sorts would not be expected to cluster together.

Although no two clusters are more than highly similar, there are some patterns that emerge. The (IAJ) have correlational patterns which are more diversified, less along the logical lines of (J-1) (J-6), (J-2) (J-3), and (J-4) (J-5). The (MAJ) tend to have higher intercorrelations between (J-2) (J-3) and (J-4) (J-5). The (IAJ) have high correlations between (J-1) (J-2) and between (J-3) (J-5). Their perceptual focal point centers in the (J-2) (J-1) relation. Perhaps they want to think that other people perceive them as they see themselves. In contrast, the (J-2) (J-3) emphasis of the (MAJ) would seem to stress personal integration as the most important concept, with less concern over whether they are viewed by other people as they think they actually are.

In conclusion, the cluster analysis reveals highly individual-

ized patterns, yet a tendency for the sorts to group around the logical divisions of (1) the Judge on self (J-2) (J-3), (2) the Judge on Subject (J-4) (J-5), and (3) the Subject on self (S-1) (S-2). The (MAJ) cluster around (J-2) (J-3); the (LAJ), around (J-2) (J-1). If a close approximation between (J-2) (J-3) is indicative of good adjustment, then the more accurate Judges are the better adjusted ones. However, regardless of adjustment there is only one Judge (K) whose sorts are part of the cluster with the Subject's Real (S-2) or Social Selves (S-1). The patterns of the other Judges contain clusters in which some of their sorts are grouped with the Subject's Ideal Self (S-3). Usually, the Judges' own Ideal Self (J-3) is in this cluster.

3. Item analysis of the (MAJ) and the (LAJ). In this section the items of the Q sort are inspected to determine whether the (MAJ) describe themselves different than the (LAJ). The self descriptions of each group are presented and more generalized trait concepts will be formulated if the statements permit of such a grouping.

In Table VIII, p. 114 and 115, the statements are presented. In the first part of the table are included the statements used by the (MAJ) to describe themselves (S-2) which are not used by the (LAJ) in their self descriptions. Only the items sorted in the three top categories, i.e., VII, VIII, and IX, are used to draw the "Most Descriptive" statements. In like manner, only the items sorted in the three bottom categories, i.e., I, II, and III, are

TABLE VIII

LIST OF STATEMENTS USED BY (MAJ)
IN DESCRIBING REAL SELVES

<u>Most Descriptive</u>	<u>Least Descriptive</u>
11. I feel that great achievements are the most important thing in life.	5. I argue against people who attempt to assert their authority over me.
12. I feel the spirit of competition in most of my activities.	6. I go my own way regardless of the opinion of others.
41. I stick to my own opinions when others disagree.	29. I like sympathy when I am sick or depressed.
42. I can usually find plenty of reasons to explain my failures.	30. I am rather dependent upon the presence and judgment of my friends.
57. I consider a matter from every standpoint before I form an opinion.	55. I often act on the spur of the moment without stopping to think.
58. I usually make a plan before I start to do something.	56. When I have to act, I am usually quick to make up my mind.
71. I am interested in everything that is going on in the world: business, politics, social affairs, etc.	
72. I like being in the thick of things.	
75. When I wish to arrive at the truth, I make a conscious attempt to eliminate sentiment and prejudice.	
76. I feel that the attempt to arrive at a deeper understanding of life is more important than practical activity.	

TABLE VIII

LIST OF STATEMENTS USED BY (LAJ)
TO DESCRIBE REAL SELF

<u>Most Descriptive</u>	<u>Least Descriptive</u>
17. Certain words are enjoyable to me just for their sound.	25. I get annoyed when some fool takes up my time.
18. I enjoy good food.	26. I avoid very close intimacies with other people.
19. I like to have people watch me do the things which I do well.	35. I have developed a good deal of self control.
20. I feel dissatisfied if I remain unnoticed.	36. I have a strong sense of responsibility about my duties.
21. I prefer the company of amusing fun loving people.	47. I organize my daily activities so that there is little confusion.
22. I seek amusement as a cure for worry.	48. I have arranged my life so that it runs smoothly and without conflict.
23. I accept social invitations rather than stay home alone.	61. It takes a good deal to make me unhappy.
24. I go out of my way just to be with my friends.	62. I am rarely very excited or thrilled.
27. I feel that I am temperamentally different from most people.	65. I finish almost everything I start.
28. I pay a good deal of attention to my appearance: clothes, hats, shoes.	66. I stick on a job even though it seems I am not getting results.
31. I enjoy playing with children.	
32. I am always ready to give or lend things to others.	

are used to draw the least descriptive statements. The statements that predominantly describe the (MAJ) and do not describe the (IAJ) are contrasted with the statements describing the (IAJ) that usually do not describe the (MAJ). This differentiation cannot be restricted exclusively to the few statements that would be selected by practically all of one group and none of the other. There are obviously too few of these for the procedure to be practical and useful. Consequently, the Most Descriptive statements are weighted three for category IX, two for VIII, and one for VII. The Least Descriptive are weighted three for category I, two for II, and one for III.

Table IX, p. 117, presents a summary of the weighted frequencies of the various statements, together with the trait or need described by each of the two accompanying statements. On the basis of these frequencies the most and least descriptive traits were selected.

The traits selected by the (MAJ) as "Most Descriptive" of themselves might be summarized as follows. They think of themselves as wishing to achieve in an active, competitive way. They have developed definite viewpoints and hold them consistently. Their lives are planned, organized. They think things out carefully before acting. They have a wide range of interests and desire to participate and give some indication of active, rather than passive participation. Lastly, they have a strong desire to know the reasons behind things and their purpose in life.

In contrast, the following characteristics of the (MAJ) are

TABLE IX
SUMMARY OF FREQUENCIES OF STATEMENTS
USED BY (MAJ) AND (IAJ)

Most Descriptive				Least Descriptive			
Trait	Item No.	Frequency		Trait	Item No.	Frequency	
		(MAJ)	(IAJ)			(MAJ)	(IAJ)
Achievement	11	4		Autonomy	5	2	2
	12	6	1		6	5	1
Sentience	17		4	Rejection	25	1	
	18	1	1		26		7
Exhibitionism	19	1	4	Succorance	29	3	
	20		1		30	3	
Play	21	2	7	Superego	35		3
	22		1		36		
Affiliation	23	2	5	Conjunctivity	47	1	3
	24		3		48	1	5
Narcissism	27		3	Impulsion	55	6	
	28		4		56		2
Nurturance	31		2	Placidity	61		4
	32	1	4		62	1	3
Defendance	41	6		Endurance	65	2	5
	42		1		66		1
Deliberation	57	3					
	58	2					
Exocathection	71	4					
	72	1	2				
Understanding	75	2	1				
	76	5	1				
Sum		40	41	Sum		25	36

regarded by them as "Least Descriptive." In Murray's terminology they reject the needs for autonomy and succorance. They are not heedless of other people, but they shy away from accepting dependent relationships. At the same time they avoid any type of aggressive assertiveness of individuality. They are neither impulsive, nor make decisions on the spur of the moment. In summary, they might be said to be predominantly inner-directed, rather than excessively concerned with the opinions and reactions of other people toward them.

The (LAJ) select as the "Most Descriptive" statements those which reflect a predominantly passive, dependent type of orientation. They are sensuous, pleasure-loving, and emotionally dependent. They seek attention and are mildly exhibitionistic and narcissistic. They crave companionship and are very conscious of the opinion and reactions of other people toward them. They win the affection of other people by generosity toward friends and acquaintances and by being interesting, entertaining, and friendly. They are somewhat too emotional to handle their problems effectively; instead they seek escape, rather than resolution.

They do not regard themselves as having developed much self-control or a sense of responsibility. They lack emotional stability and persistence. They are easily swayed by the pressures of the situation and their feelings. They view their lives as rather poorly organized and not running smoothly. In brief, they are "other"

rather than "self" directed. They are less effectively integrated and less able to control their emotions.

Comparing the two groups, the (MAJ) appear more self-directed, confident, socially responsible, and mature than the (LAJ). The latter are more emotional and more socially apprehensive, because of their need for approbation. In general, the (MAJ) select the more masculine, the (LAJ) the more feminine traits. However, only one of each group is a female.

These results tend to agree with some previous findings that reported that the well-adjusted make better judges than the poorly adjusted. The usual assumption has been that the well-adjusted Judge evaluates better and is more accurately evaluated. If the (MAJ) are not actually better adjusted, the items they select reveal them as individuals who are less susceptible to emotional influences and better able to deal with their problems than are the (LAJ).

Concerning the Judges' description of the Subject, a comparison between the description by the (MAJ) with the one by the (LAJ) indicates that the items chosen as most descriptive of the Subject were used with about equal frequency by both (MAJ) and (LAJ). The items not used by both groups were very diverse and differed so extensively from Judge to Judge that the items could not be used to distinguish the groups. However, there is a slight tendency for both the (MAJ) and the (LAJ) to select some items descriptive of

themselves in rating the Subject. However, this tendency is not very strong.

The least descriptive items in the Judges' description of the Subject chosen by the (MAJ) and the (LAJ) fall into patterns similar to those described above. The items are either diffused over the Judges, or are selected with almost equal frequency by (MAJ) and (LAJ).

In conclusion, there are greater differences in the way the (LAJ) and the (MAJ) rate themselves than in their ratings of the Subject. This might have been expected from the comparisons of the correlations between the Real Selves (S-2) (J-2) of Judges and Subject and the Judges' ratings on the Subject (J-5) and their Real Selves (J-2). There was more real similarity than perceived similarity. While there was more assumed similarity than real similarity, the assumptions were generally in the wrong direction, i.e., toward the Subject's Ideal Self (S-3). The survey of the items merely confirms the tendencies demonstrated by the sorts. A final example may illustrate a very disappointing feature of the Judges "accuracy" in rating the Subject.

If we take the Real sorts (J-2) of Judges N and K, and the Real sort of the Subject (S-2) and intercorrelate them, the following correlations result:

Judge N (J-2) and Judge K (J-2) correlate .13.

Judge N (J-2) and Subject (S-2) correlate .02.

Judge K (J-2) and Subject (S-2) correlate .24.

However, if the rating of Judge N on Subject (J-5) and compare it with the Real Self of Judge K (J-2), as if N were rating K, there result the following correlations:

Judge N (J-5) and Judge K (J-2) correlate .32.

Judge N (J-5) and Subject (S-2) correlate .12.

In part this stems from the high correlations between the Ideal Selves of the Judges (J-3) and the high correlation for many Judges between their Ideal sorts (J-3) and their ratings on the Subject (J-5). In this instance it is obvious that the best Judge does an excellent job of predicting another Judge when he is actually rating the Subject. Consequently, the following conclusion is apparent: accuracy is more a function of the individual who is judged than the person who judges.

The more important structural features of the data have been analyzed and discussed. The summary and conclusions follow.

CHAPTER V

SUMMARY AND CONCLUSIONS

This study was conducted to explore some relations between the perception of self and the perception of another. If a group of Judges all perceive the same Subject, differences in their perception can be compared with their perception of self.

Nineteen students in a college class in general psychology and their instructor served as participants.

The nineteen Judges (students) rated themselves and the Subject (instructor), using the seventy-six item Q sort of Fiedler. The Judges made the following six ratings: (1) Social, (2) Real, and (3) Ideal Selves, (4) the Subject as they perceive him, (5) the Subject as they believe he sees himself, (6) themselves as they believe the Subject would rate them. The Subject made the first three ratings on himself. Analysis of the data yielded the following results.

A. General Characteristics.

The Judges' rating of the Subject approximates first the Judges' Ideal Selves, then their Real Selves, next the Subject's Ideal Self, and finally, the Subject's Real Self.

In addition, the Judges perceived far greater similarity between their

ratings on themselves (J-2) and their ratings on the Subject (J-5) than actually exists between the Real Self of the Subject (S-2) and the Judges' Real Selves (J-2).

Furthermore, in their ratings of the Subject, the Judges' accuracy stems primarily from the fact that their (J-5) sorts correlate rather high with their Real sorts (J-2), which in turn generally correlate positive with the Real Self of the Subject (S-2). The similarities between (S-2) and (J-5) stem primarily from (J-2) rather than from the stimuli which the Subject rates in his (S-2) sort. However, the stimuli rated by the Subject in his Ideal sort (S-3) correlates higher with (J-5) than with his Real (S-2) sort.

The individual Judge's rating of the Subject (J-5) approximates the other Judges' ratings of the Subject (J-5 avg. - 1), rather the Subject's rating on himself (S-2). In part this can be explained by the relatively high correlations between the Judges' Ideal Selves (J-3) and their ratings on the Subject (J-5) and by the relatively close approximations between the Ideal Selves (J-3) of the various Judges.

There are greater differences between sorts than between Judges. There are consistently higher correlations between some sorts than others regardless of the individual differences between Judges. Individual differences between Judges is largely a matter of the interrelations between all their sorts--whether their overall correlations are generally high or low. Consequently, a dual pattern is present, one between sorts and another between Judges.

B. Specific Characteristics.

Judges rating the Subject most accurately tend to have a high correlation

between their Real and Ideal sorts (J-2) (J-3) than Judges who rated the Subject less accurately. High correlations between the other sorts are not related to accuracy of judgment.

The five Most Accurate Judges (MAJ) were compared with the five Least Accurate Judges (LAJ). A cluster analysis reveals marked individual differences between the various Judges in terms of the intercorrelations of their six sorts with the Subject's three sorts. There is a general tendency for the sorts to group around: (1) the Judge's rating of himself, (2) the Subject's rating of himself, (3) the Judge's rating of the Subject. However, the Subject's Social and Real Selves (S-1) and (S-2) usually form an independent cluster. Only one Judge has a cluster pattern in which the Subject's Real Self (S-2) is related to any of the Judge's sorts. For the other Judges, the Subject's Ideal sort (S-3) is usually related to one of the Judge's self sorts. There is a trend in the (MAJ) to cluster in the more expected logical patterns, such as (J-2) (J-3), (J-4) (J-5), and (J-1) (J-6). The (LAJ) are less logically grouped.

There is a tendency for certain items and traits to distinguish the (MAJ) from the (LAJ). The (MAJ) are more inner-directed, confident, and more emotionally stable. The (LAJ) are more outer-directed, emotionally unstable, and socially dependent. In a very general sense, the (MAJ) claim the more masculine traits, the (LAJ) the more feminine. If the (MAJ) are not better adjusted, the traits they claim enable them to cope more effectively with their environment and problems. The (LAJ) are more at the mercy of circumstances, the opinions of others, and emotional cycles than are the (MAJ). However, the Judges' perception of the Subject is not markedly different for either group. In particular

this stems from the general consistency of all Judges in rating the Subject in a somewhat similar way, even though their ratings were quite different from the Subject's rating of himself.

C. Relationship between Subject and Judge.

The Judges' perception of the way the Subject would rate them approximates first their Real Selves (J-2), second their Social Selves (J-1), and third, their Ideal Selves (J-3). Evidently they believe the Subject perceives them more accurately than do other people and in a slightly more critical manner, rather than in terms of an idealistic framework.

Just what the Judge perceives when rating the Subject becomes even more questionable in the following comparison. When Judge N rated the Subject (J-5) his rating correlated .12 with the Subject's rating on himself (S-2). However, if Judge N's rating on the Subject (J-5) is compared instead with the rating of Judge K on himself (J-2), the correlation obtained is .32. Consequently, the Judge does a fine job of rating another Judge by actually rating the Subject.

This result seems to indicate that in an experimental setting such as this one the characteristics of the person judged are more important than the perceptions of the Judge. In the writer's opinion, these correlations explain why some previous studies reported that Judges tended to rate most accurately Subjects similar to themselves in age, occupation, and personality. Judges make ratings on Subject similar to the rating they (the Judges) make on themselves.

COMMENTS AND CONCLUSIONSQ Sort.

The composition of a Q sort presents some special problems of its own. The sort used here was compared with those of Stephenson and Rogers. Stephenson's was based on Jungian typology and Rogers' sort was drawn from client-centered interviews. While Murray obviously has a theory of personality, the items selected by Fiedler represent more an all-encompassing set of personality descriptions, rather than statements stemming from an integrated concept of personality or from specific complaints of patients. The sorts of Fiedler and Rogers enable the examiner to reconstruct the Subject's internal frame of reference void of integrating concepts. Some of Stephenson's sorts permit the experimenter to classify the subject in terms of the thinking or feeling types. The advantage of Fiedler's sort is that the experimenter need not assume that the statements actually describe those traits and only those traits under which they are classified. In Stephenson's sort this assumption is plausible, even if not necessary. The disadvantage of Fiedler's sort is that it is difficult to compare subject's in terms of unifying concepts. For example, Fiedler has selected two statements for each of Murray's needs. In many instances the subject will select one of these statements as very descriptive of himself and sort another as neutral or non-descriptive. Consequently, constructing a subject description in terms of traits based on item placement is often impractical. A pattern of traits might distinguish one subject from another, but the root concepts must be left to the examiner to formulate a description in such terms

if desired or necessary. In this study the least accurate and most accurate Judges could be loosely differentiated in terms of the statements they selected to describe themselves, even though they could not be differentiated on the basis of their descriptions of the Subject.

Sorting the Statements.

The Q sort technique has been criticized as being too difficult for subjects of limited ability to understand and too cumbersome to administer on a large scale. The writer believes that the methodology used in this study makes administration on a fairly large scale possible. Admittedly, ranking seventy-six items accurately is a difficult task. Furthermore, although each statement centers around a single concept, some of them are rather complex. Then, the time consumed in executing the sorts as reported by the Judges ranged from twenty minutes to two hours per sort. Consequently, the writer agrees that this is not a task for someone of below average intelligence. Furthermore, in view of the difficulty of the task, together with the length of time required to complete it, fairly strong motivation on the part of the participants is required if it is to be completed.

In addition, the social psychology of the experimental situation is not to be ignored in interpreting the results. In this study it may represent one of the most crucial features of the outcome. The Judges (students) may have been hesitant to offer their candid opinions of the Subject (instructor) because they believed he might discover them sometime in the future. It was mentioned to the Judges that the content of the sorts would not be inspected for some time, and it was not. Nevertheless, the Judges' interpretation of

these remarks remains unknown.

Furthermore, it may be that the students are inclined to think favorably of teachers in general and rate them accordingly. However, in view of the frequent outspoken criticism of teachers made by most college students, this possibility does not seem very likely.

Another interpretation is the literal one, that the Judges actually perceived the Subject as they rated him. The Subject believed that his rapport with the class was rather good and it is conceivable that this represents their actual opinion.

Finally, if the Judges perceive the Subject as someone generally similar to themselves, they obviously are not going to rate him the same as they would if they perceive him as quite different from themselves. Because of the differences in age, status, and background, it is unlikely that the Judges regarded the Subject as one of their peers. Consequently, many of the problems, conflicts, and confusions they experienced personally would not be thought of as attributable to the Subject.

The writer believes each of these features is operative in at least some of the Judges.

The Process of Judging.

The results seem to indicate that the process of judging is done in terms of the internal frame of reference of the individual judge in this way. The low level of accuracy in judgment does not indicate that the Judges are viewing a hollow man, but they perceive him only within the limitations of their own perceptual systems.

As mentioned before, in studying the judgmental process at least five factors must be considered: (1) the Judge, (2) the Subject, (3) what is observed, (4) how the observation is reported, and (5) how the reporters evaluated it. Let us refer to Fig. 1, p. 130, in discussing judgment in terms of the internal frame.

In Section A of Fig. 1, a brief sketch is presented of the various stages of complexity in the perceptual process. Perception based on the physical features of a subject, such as his size, shape, and color, would most likely be reported in highly similar terms by almost any group of judges. Next, observable activities would more readily be agreed upon, such as the fact that the subject is talking and not running. However, his motives for talking and not running can be constructed only from the observed physical characteristics and activities. As in B of Fig. 1, accuracy increases as the stimulus proceeds from complex thought processes to simple acts of behavior.

In Section C of Fig. 1 the first diagram illustrates how the personality make-up of the Judge is instrumental in determining his motives and those of the Subject. If there is a direct, immutable relationship between any need, behavior, and goal, observation of behavior will enable the Judge to predict with accuracy the goal sought by the Subject or the need from which the behavior springs. However, if the second illustration is more descriptive of the Judge and/or the Subject, a less satisfactory understanding and prediction will be possible. In this case a given need such as (N_1) may find satisfaction through a variety of behavior patterns (B_1, B_2, B_3). Furthermore, B_1 might be directed toward Goal₁ or Goal₂. Similar complications are found in relation to the other

a. Color
Size → Behavior → Need
Shape

b. Behavior Simple Complex
Thought

c. Goal ← Behavior ← Need

d.

Subject Y

	# 3
T	# 6
	# 7
	# 8

Judge W

	# 1	
	# 6	T
	# 7	

Subject Z

	# 6
T	# 12
	# 17

Judge X

	# 1	
	# 3	T
	# 6	

Fig. 1

DIAGRAMS OF SOME PERSONAL PERCEPTUAL PROCESSES AND ACTS

activities (B_2 , B_3 , and B_4). Consequently, judging the needs or motives of an individual can be done only in terms of the subject's peculiar patterns of needs, behavior, goal relationships.

In Section D of Fig. 1 this complex is illustrated more specifically. Let us say that Judges W and X both possess trait T. Judge W describes this trait in himself in terms of statements #1, #6, and #7. Although there is considerable overlap in this trait for both Judges, Judge X describes this trait in himself in terms of statements #1, #3, #6. Judges W and X then proceed to evaluate Subjects Y and Z. Trait T exists in both Y and Z. However, Y describes it in terms of statements #3, #6, #7, and #8. Z describes the same in terms of #6, #12, and #17. When W makes his predictions of Y he proceeds to describe T in terms of #1, #6, #7; that is, what T means to him (Y). He will be correct as to #6 and #7, but will miss on #3 and #8. He will also attribute #1 to Y.

Similarly, when X evaluates Y he will be correct on #3 and #6, but will miss on #7 and #8. He will also attribute #1 to Y incorrectly. However, their predictions will be more accurate on Y than on Z because both W and X will be correct only on #6 for Z. Both Judges attain the same degree of accuracy on Y, but in different ways. W was correct on #6 and #7, while X was correct on #3 and #6. Neither W nor X describe Z in terms of statements #12 and #17. If #6 represents the more observable behavior in each cluster, both Judges are accurate on this item. However, accuracy of judgment on the other items is the result not of what is precisely observed, but of what is associated or inferred. Consequently, both W and X judge Y more accurately than they

judge Z simply because subject Y associates more common elements with trait T than does Z.

The writer believes that the above descriptions account at least in part for the relatively poor predictions of the Subject made by the Judges. The Subject associated different goals and needs with his behavior than did the Judges. This outcome might be expected, since there are obvious differences in age, status, and the instructor-student relation, as well as educational background. With a background in psychology, the Subject would be expected to interpret his behavior in a different way from the Judges, irrespective of whether his self-observations are more "correct" or not.

In conclusion, the process of personal perception might be described in this way. In evaluating another person the Judge views the Subject's behavior and other observable attributes. If the situation calls for description of the Subject's needs, motives, and unobserved behavior, the Judge turns within himself for the answer. He describes the Subject in terms of his own patterns of values, attitudes, and emotions associated with this behavior. Consequently, personal perception is a process in which external and internal factors are fused in terms of the total situation, the entire experiences, and the personality dynamics of the Judge.

In the writer's opinion, a more profitable approach to interpersonal perception is to abandon the concept of accuracy of perception as such and instead conduct experiments designed to uncover data which will lead eventually to a description of the characteristics of the Judge's internal frame of reference which influence his perception of certain elements of the Subject's

physique and behavior as associated with specific needs and goals. Thus the issue becomes not a question of whether one individual understands another, but rather how will two individuals with certain characteristics perceive each other. Data of this kind could serve as a basis for a realistic theory of interpersonal perception.

APPENDIX I

"THE SIMILE OF THE CAVE" FROM BOOK VII

OF THE REPUBLIC OF PLATO

'I want you to go on to picture the enlightenment or ignorance of our human conditions somewhat as follows. Imagine an underground chamber, like a cave with an entrance open to the daylight and running a long way underground. In this chamber are men who have been prisoners there since they were children, their legs and necks being so fastened that they can only look straight ahead of them and cannot turn their heads. Behind them and above them a fire is burning, and between the fire and the prisoners runs a road, in front of which a curtain-wall has been built, like the screen at puppet shows between the operators and their audience, above which they show their puppets.'

'I see.'

'Imagine further that there are men carrying all sorts of gear along behind the curtain-wall, including figures of men and animals made of wood and stone and other materials, and that some of these men, as is natural, are talking and some not.'

'An odd picture and an odd sort of prisoner.'

'They are drawn from life,' I replied. 'For, tell me, do you think our prisoners could see anything of themselves or their fellows except the shadows thrown by the fire on the wall of the cave opposite them?'

'How could they see anything else if they were prevented from moving their heads all their lives?'

'And would they see anything more of the objects carried along the road?'

'Of course not.'

'Then if they were able to talk to each other, would they not assume that the shadows they saw were real things?'

'Inevitably.'

'And if the wall of their prison opposite them reflected sound, don't you think that they would suppose, whenever one of the passers-by on the road spoke, that the voice belonged to the shadow passing before them?'

'They would be bound to think so.'

'And so they would believe that the shadows of the objects we mentioned were in all respects real.'

'Yes, inevitably.'

'Then think what would naturally happen to them if they were released from their bonds and cured of their delusions. Suppose one of them were let loose, and suddenly compelled to stand up and turn his head and look and walk towards the fire; all these actions would be painful and he would be too dazzled to see properly the objects of which he used to see the shadows. So if he was told that what he used to see was mere illusion and that he was now nearer reality and seeing more correctly, because he was turned towards objects that were more real, and if on top of that he were compelled to say what each of the passing objects was when it was pointed out to him, don't you think he would be at a loss, and think that what he used to see was more real than the objects now being pointed out to him?'

'Much more real.'

APPENDIX II

STATEMENTS OF Q SORT

1. I usually influence others more than they influence me.
2. I am usually the one to make the necessary decisions when I am with another person.
3. I accept suggestions rather than insist on working things out in my own way.
4. In matters of conduct I conform to custom.
5. I argue against people who attempt to assert their authority over me.
6. I go my own way regardless of the opinions of others.
7. I am likely to enjoy getting a person's goat.
8. I enjoy a good hot argument.
9. I am more apt to give in than to continue the fight.
10. I feel nervous and anxious in the presence of superiors.
11. I feel that great achievements are the most important thing in life.
12. I feel the spirit of competition in most of my activities.
13. I spend a good deal of time planning my career.
14. I demand for myself more than anyone can demand for me.
15. I fall in love rather easily.
16. I have difficulty controlling my sexual impulses.
17. Certain words are enjoyable to me just for their sound.

18. I enjoy good food.
19. I like to have people watch me do the things I do well.
20. I feel dissatisfied if I remain unnoticed.
21. I prefer the company of amusing fun loving people.
22. I seek amusement as a cure for worry.
23. I accept social invitations rather than stay home alone.
24. I go out of my way just to be with friends.
25. I get annoyed when some fool takes up my time.
26. I avoid close intimacies with other people.
27. I feel that I am temperamentally different from most people.
28. I pay a good deal of attention to my appearance: clothes, hats, shoes.
29. I like sympathy when I am sick or depressed.
30. I am rather dependent upon the presence and judgment of my friends.
31. I enjoy playing with children.
32. I am always ready to give or lend things to others.
33. I feel upset if I hear that people are criticizing or blaming me.
34. I do a great many things just to avoid criticism.
35. I have developed a good deal of self control.
36. I have a strong sense of responsibility about my duties.
37. I often ask myself: "Have I done right?"
38. I feel remorse when I think of some of the things I have done.
39. I usually lack self-confidence when I have to compete against others.
40. I worry a lot about my ability to succeed.
41. I stick to my own opinions when others disagree.

42. I can usually find plenty of reasons to explain my failures.
43. I go out to meet trouble rather than try to escape it.
44. I usually say "No" when someone offers to assist me.
45. I am afraid of physical pain.
46. Sometimes I fear that I may be injured in an accident.
47. I organize my daily activities so that there is little confusion.
48. I have arranged my life so that it runs smoothly and without conflict.
49. I find it difficult to exclude irrelevant ideas and pin myself down to one line of thought.
50. My desires are often at war with one another.
51. I am somewhat disturbed when my daily habits are disrupted by unforeseen events.
52. I am consistent and dependable in my dealings with others.
53. I frequently start new projects without waiting to finish what I have been doing.
54. I find it difficult to keep to any routine.
55. I often act on the spur of the moment without stopping to think.
56. When I have to act, I am usually quick to make up my mind.
57. I consider a matter from every standpoint before I form an opinion.
58. I usually make a plan before I start to do something. .
59. I have intense likes and dislikes.
60. I am influenced in my decisions by how I happen to be feeling at the time.
61. It takes a good deal to make me unhappy.
62. I am rarely very excited or thrilled.
63. I am intense about the things which interest me.

64. I feel fresh, vigorous and ready for anything, most of the time.
65. I finish almost everything I start.
66. I stick on a job even though it seems I am not getting results.
67. I feel things deeply and personally, and am sensitive to the deeper feelings of others.
68. My own feelings tell me what is right.
69. I am more interested in a person's behavior than in his inner life.
70. When I think out a problem I keep very close to the facts.
71. I am interested in everything that is going on in the world: business, politics, social affairs, etc.
72. I like being in the thick of action.
73. I would rather write a fine book than be an important public figure.
74. I dislike everything that has to do with money--buying, selling, and bargaining.
75. When I wish to arrive at the truth, I make a conscious attempt to eliminate and prejudice.
76. I feel that the attempt to arrive at a deeper understanding of life is more important than practical activity.

APPENDIX III

Name _____

Rating (check):

- () 1. As other people see you.
() 2. As you see yourself.
() 3. As you would like to be.
() 4. As you see the Subject.
() 5. As you think Subject sees self.
() 6. As you think the Subject
would rate you.

[illegible]

APPENDIX IV

INSTRUCTIONS

1. Arrange the nine cards with Roman numerals in the order illustrated below:

Least descriptive			Neutral traits			Most descriptive		
I	II	III	IV	V	VI	VII	VIII	IX
1 Card	4	7	13	25	13	7	4	1

2. The 76 statements on the cards are to be classified according to how well they describe yourself or someone else. If you are rating yourself, for example, you might start by placing the statements in three groups, about 25 statements to a group. The first group would be the statements that are generally descriptive of your attitudes and behavior. The second group of 25 would be statements that are largely neutral: neither very much like you nor very much unlike you. The third group would be the statements that are for the most part not descriptive of you.
3. The statements are then broken down further so that (in the illustration above) Group IX would take the statement most descriptive of you, Group VII, 4 statements slightly less characteristic of you, Group VII, 7 statements somewhat less descriptive, and category VI, statements descriptive, but less apt than those in the previous categories.

Group V would contain the neutral statements.

The remaining statements would be grouped in a similar manner. Group I would contain the statement farthest removed from what you think you are like. Group II, statements unlike you but not so extreme as Group I, etc.

This is known as a forced choice distribution. You might feel that there are fewer statements descriptive of you and more statements that do not apply. This is not an absolute, but a relative evaluation; that is, the sorting merely implies that the statements in Group IX are more like you than those in Group VIII, which are more like you than those in Group VII, and so on through Group I.

4. Record the Number of the statement on the record form. Please be sure that each statement is classified and that there is no duplication. Be sure to check the type of rating on the record form, whether Real Self, Ideal Self, etc.

Use a separate record form for each rating.

APPENDIX V

POST SORT QUESTIONNAIRE

Part I.

Indicate in the spaces below (1) the order in which you made the ratings, which first, second, etc. (2) the date of the ratings, the time for each approximately in minutes, (3) the order of difficulty, which one you found most difficult, (4) which rating was most similar to which other, e.g., 4 was like 1; 2 was like 6; etc.

Rating	Order	Time	Date	Difficulty	Similarity
Real Self					
Ideal Self					
As others see us					
As I see E					
As E sees himself					
As E sees me					

Part II.

1. Were there any group or kinds of questions you found most difficult to assign accurately?
2. Did you feel that your standards of analysis and opinion of yourself and others were changing during the ratings? Were they different after the last rating than after the first?
3. Were you conscious of any set or principles or method of analysis that you applied or did you simply assign the cards to categories largely on hunches?
4. If it is possible to make ratings on yourself and others in this way, on what basis can we say that we are one, identical throughout life?

APPENDIX VI

VERBAL INSTRUCTIONS TO THE SUBJECTS

The envelope you received contains a set of seventy-six cards. On each card is printed a statement descriptive of some personality trait, attitude, opinion, or item of behavior. You are to use these cards in describing yourselves. Instead of answering these questions as you do some, by "yes" or "no," you are to rank these statements according to which ones are most like you to those that are least like you.

It would probably be extremely difficult to rank the statements one through seventy-six because many of the statements could be placed in a group that would be more like you than, say, another group of statements.

To facilitate this grouping and to make exact comparisons between your several sorts possible, this plan should be followed.

First, go through the statements and place them in one of three groups about twenty-five cards to each. In the first group you would place the statements of traits descriptive of you; in the second, neutral ones; and in the third, statements of traits that are unlike you.

Next, the statements are arranged more exactly according to this plan. (Categories I through IX are written on the board with the appropriate number of statements for each category.) The cards with Roman numerals on the top of the stack correspond to these nine categories. Simply arrange the nine cards in a row as illustrated on the Instruction Sheet. Then assign the most descriptive statement to Group IX, the next four most descriptive statements to Group VIII, and so on. After the sort is completed check to see that you have the exact number specified in each group.

Next, record the number of the statement on the Record sheet. There must be no omissions, no duplication, no blanks, on this form.

Note that at the upper left-hand corner of the Record form are the actual descriptions of the sort, and a definition of each one, such as (1) "Social Self, as other people see me," and so forth. Do each sort independently. Make these ratings as carefully, accurately, and truthfully as you can. Use a separate Record sheet for each sort. After the last sort is finished, complete the Post Sort Questionnaire.

APPENDIX VII

INTERCORRELATIONS OF SUBJECT'S AND JUDGES' SORTS

	1	2	3	4	5	6	7	8	9
	J-4	J-1	J-1	J-3	J-2	J-3	J-2	S-1	J-1
	J-5	J-2	J-6	J-5	J-3	J-4	J-6	S-2	J-3
K	.96	.89	.85	.41	.91	.43	.84	.41	.84
C	.93	1.00	.59	.83	.69	.87	.59	.41	.69
A	1.00	.95	1.00	.54	.64	.54	.95	.41	.69
T	.82	.30	.36	.68	.82	.64	.43	.41	.28
N	.86	.88	.29	.40	.89	.38	.41	.41	.78
R	.70	.65	.49	.51	.44	.50	.61	.41	.57
L	.52	.45	.18	.51	.66	.50	.40	.41	.32
V	.15	.46	1.00	.55	.39	.07	.46	.41	.58
H	.57	.58	.32	.40	.16	.73	.41	.41	.07
E	1.00	.22	.79	.68	.57	.68	.38	.41	-.03
G	.82	.80	.47	.29	.24	.38	.48	.41	.29
B	.62	.52	.43	.51	.62	.50	.41	.41	.27
I	.75	.54	.27	.54	.43	.30	.32	.41	.51
W	.57	.39	.23	.48	.36	.52	.26	.41	.39
D	.32	-.10	-.02	.37	.15	.60	.42	.41	.24
F	.31	.60	.25	.36	.39	.17	.04	.41	.16
S	.18	.17	.11	.38	-.03	.19	.12	.41	-.04
M	.36	.55	-.13	.51	.10	.28	-.07	.41	.01
P	.40	.17	.17	.45	-.07	.26	.19	.41	.07
Avg. r	.80	.68	.64	.51	.51	.48	.45	.41	.40
Range									
from	1.00	1.00	1.00	.83	.91	.87	.95	.41	.84
to	.15	-.10	-.13	.29	-.07	.07	-.07	.41	-.04

APPENDIX VII

INTERCORRELATIONS OF SUBJECT'S AND JUDGES' SORTS

	10	11	12	13	14	15	16	17	18
	S-3	J-3	J-2	J-2	J-1	S-3	J-4	J-5	J-1
	J-3	J-6	J-5	J-4	J-5	J-5	J-6	J-6	J-4
K	.36	.81	.41	.44	.44	.19	.60	.57	.46
C	.39	.76	.58	.58	.58	.32	.67	.67	.58
A	.44	.69	.32	.32	.30	.16	.30	.30	.30
T	.48	.39	.64	.58	.22	.50	.46	.48	.32
N	.34	.35	.37	.35	.31	.33	.20	.20	.29
R	.39	.39	.45	.50	.37	.16	.46	.44	.41
L	.40	.32	.31	.37	.24	.37	.36	.15	.15
V	.43	.58	.24	.37	.51	.32	.36	.51	.36
H	.31	.21	.44	.41	.33	.38	.32	.23	.30
E	.41	.11	.59	.59	.17	.30	.22	.22	.17
G	.33	.47	.24	.26	.28	.08	.68	.64	.29
B	.43	.33	.34	.38	.10	.14	.01	.15	.06
I	.40	.15	.23	.13	.47	.35	.13	.26	.36
W	.29	.12	.26	.17	.00	.24	.02	-.05	.12
D	.33	-.12	.10	.07	.15	.09	-.12	-.06	.29
F	.36	-.09	.23	-.11	.11	.10	-.20	-.23	-.20
S	.40	.38	-.02	.04	.04	.12	.05	.08	.01
M	.51	-.19	.24	.08	.24	.32	.01	-.20	.09
P	.31	.09	.05	.18	-.05	.35	-.11	-.01	-.19
Avg. r	.39	.33	.33	.30	.26	.25	.25	.25	.23
Range									
from	.48	.81	.64	.59	.58	.50	.68	.67	.58
to	.29	-.19	-.02	-.18	-.05	.08	.20	-.23	-.20

APPENDIX VII

INTERCORRELATIONS OF SUBJECT'S AND JUDGES' SORTS

	19	20	21	22	23	24	25	26	27
	S-3	S-3	S-3	S-3	S-2	S-1	S-1	S-2	S-1
	J-4	J-2	J-1	J-6	S-3	J-2	S-3	J-2	J-1
K	.15	.28	.21	.30	.12	.29	.10	.24	.21
C	.37	.23	.23	.21	.12	.18	.10	.17	.18
A	.16	.53	.54	.54	.12	.07	.10	-.10	.05
T	.51	.37	.19	.21	.12	.22	.10	.03	.03
N	.32	.34	.37	.21	.12	.02	.10	-.02	.10
R	.16	.05	.19	.29	.12	.11	.10	.11	.16
L	.32	.24	.13	-.04	.12	.26	.10	.29	.26
V	.05	.22	.37	.37	.12	-.10	.10	.10	-.02
H	.47	.28	.21	.45	.12	.21	.10	.09	.11
E	.30	.06	-.48	-.26	.12	.23	.10	.25	-.08
G	.00	.11	.18	.10	.12	.08	.10	.20	.03
B	.36	.24	.15	.21	.12	.31	.10	-.03	.14
I	.33	.16	.43	-.20	.12	-.01	.10	.03	.04
W	.44	.21	-.11	-.05	.12	.12	.10	.04	.05
D	.16	.13	.08	.12	.12	.09	.10	.22	-.03
F	-.18	.45	.21	.03	.12	.16	.10	.08	-.12
S	-.06	-.02	-.05	.32	.12	-.10	.10	-.01	.11
M	-.04	-.02	.03	-.33	.12	-.04	.10	.01	-.18
P	.03	-.17	.05	-.12	.12	.10	.10	.01	.12
Avg. r	.21	.20	.16	.13	.12	.12	.10	.09	.06
Range from	.47	.53	.54	.54	.12	.31	.10	.29	.26
to	-.18	-.17	-.48	-.33	.12	-.10	.10	-.10	-.18

APPENDIX VII

INTERCORRELATIONS OF SUBJECT'S AND JUDGES' SORTS

	28	29	30	31	32	33	34	35	36
	S-1	S-2	S-1	S-1	S-1	S-2	S-2	S-2	S-2
	J-4	J-6	J-3	J-6	J-5	J-1	J-5	J-4	J-3
K	.19	.32	.25	.41	.18	.17	.07	.07	.21
C	-.01	.08	.08	.09	.01	.17	-.06	-.06	.04
A	.08	-.14	.01	.05	.08	-.14	-.13	-.13	-.21
T	.07	.00	.05	.04	.02	-.20	.01	-.06	.12
N	.19	-.01	.03	-.11	.29	-.08	.12	-.02	-.03
R	.07	.03	.05	.06	.03	-.01	-.13	-.12	-.11
L	.03	.30	.16	.22	.09	-.08	.06	.00	.12
V	.07	.06	-.12	-.02	-.01	.06	-.10	.22	-.16
H	.07	.26	.03	.03	.09	.04	.00	-.15	-.07
E	.10	.00	.14	-.12	.10	-.03	-.01	-.01	.04
G	-.11	.10	-.12	-.09	.11	.07	-.15	-.09	-.02
B	.10	-.11	.13	.11	.01	-.08	-.20	-.18	-.27
I	.08	-.11	-.01	-.05	-.03	.03	-.20	-.09	-.19
W	.03	.08	.02	.17	-.06	-.05	-.08	-.18	-.19
D	-.13	.20	.09	.13	-.22	-.05	-.18	-.22	-.23
F	.07	.03	-.02	-.21	.04	-.07	.03	.07	-.11
S	-.02	-.27	-.04	-.09	.04	.11	-.05	-.15	-.16
M	-.04	.03	-.04	.08	-.17	.04	-.10	-.18	-.22
P	.03	-.04	.08	.01	-.06	.16	-.31	-.15	-.10
Avg. r	.05	.04	.04	.04	.02	.00	-.01	-.01	-.01
Range									
from	.19	.32	.25	.41	.29	.17	.12	.22	.21
to	-.13	-.27	-.12	-.21	-.22	-.20	-.31	-.22	-.27

APPENDIX VIII

Z SCORES OF THIRTY-SIX INTERCORRELATIONS

	1	2	3	4	5	6	7	8	9
	J-4	J-1	J-1	J-3	J-2	J-3	J-2	S-1	J-1
	J-5	J-2	J-6	J-5	J-3	J-4	J-6	S-2	J-3
K	1.95	1.42	1.26	.44	1.53	.46	1.22	.44	1.22
C	1.66	3.80	.68	1.19	.85	1.33	.68	.44	.85
A	3.80	1.83	3.80	.60	.76	.60	1.83	.44	.85
T	1.16	.31	.38	.83	1.16	.76	.46	.44	.29
N	1.29	1.38	.30	.42	1.42	.40	.44	.44	1.06
R	.87	.78	.54	.56	.47	.55	.71	.44	.65
L	.58	.48	.18	.56	.79	.55	.42	.44	.33
V	.15	.50	3.80	.62	.41	.07	.50	.44	.66
H	.65	.66	.33	.42	.16	.93	.44	.44	.07
E	3.80	.22	1.07	.83	.65	.83	.40	.44	-.03
G	1.16	1.10	.51	.30	.24	.40	.52	.44	.30
B	.73	.58	.46	.56	.73	.55	.44	.44	.28
I	.97	.60	.27	.60	.46	.31	.33	.44	.56
W	.65	.41	.23	.52	.38	.58	.26	.44	.41
D	.33	-.10	-.02	.39	.15	.70	.45	.44	.24
F	.32	.69	.26	.38	.41	.17	.04	.44	.16
S	.18	.17	.11	.40	-.03	.19	.12	.44	-.04
M	.38	.62	-.13	.56	.10	.29	-.07	.44	.01
P	.42	.17	.17	.48	-.07	.27	.19	.44	.07
Avg. z	1.11	.82	.75	.56	.56	.52	.49	.44	.42
Avg. r	.80	.68	.64	.51	.51	.48	.45	.41	.40
Totals	21.05	15.62	14.20	10.66	10.57	9.94	9.38	8.36	7.93

APPENDIX VIII

Z SCORES OF THIRTY-SIX INTERCORRELATIONS

	10	11	12	13	14	15	16	17	18
	S-3	J-3	J-2	J-2	J-1	S-3	J-4	J-5	J-1
	J-3	J-6	J-5	J-4	J-5	J-5	J-6	J-6	J-4
K	.37	1.13	.44	.47	.47	.19	.69	.65	.50
C	.41	1.00	.06	.66	.66	.33	.81	.81	.66
A	.47	.85	.33	.33	.31	.16	.31	.31	.31
T	.52	.41	.76	.66	.22	.55	.50	.52	.33
N	.35	.37	.39	.37	.32	.34	.20	.20	.30
R	.41	.41	.48	.55	.39	.16	.50	.47	.44
L	.42	.33	.32	.39	.24	.39	.38	.15	.15
V	.46	.66	.24	.39	.56	.33	.38	.56	.38
H	.32	.21	.47	.44	.34	.40	.33	.23	.31
E	.44	.11	.68	.68	.17	.31	.22	.22	.17
G	.34	.51	.24	.27	.29	.08	.83	.76	.30
B	.46	.34	.35	.40	.10	.14	.01	.15	.06
I	.42	.15	.23	.13	.51	.37	.13	.27	.38
W	.30	.12	.27	.17	.00	.24	.02	-.05	.12
D	.34	-.12	.10	.07	.15	.09	-.12	-.06	.30
F	.38	-.09	.23	-.11	.11	.10	-.20	-.23	-.20
S	.42	.40	-.02	.04	.04	.12	.05	.08	.01
M	.56	-.19	.24	.06	.24	.33	.01	-.20	.09
P	.32	-.09	.05	-.18	-.05	.37	-.11	-.01	-.19
Avg. z	.41	.34	.34	.31	.27	.26	.26	.25	.23
Avg. r	.39	.33	.33	.30	.26	.25	.25	.25	.23
Totals	7.71	6.51	6.46	5.81	5.07	5.00	4.94	4.83	4.42

APPENDIX VIII

Z SCORES OF THIRTY-SIX INTERCORRELATIONS

	19	20	21	22	23	24	25	26	27
	S-3	S-3	S-3	S-3	S-1	S-2	S-1	S-2	S-1
	J-4	J-2	J-1	J-6	J-2	S-3	S-3	J-2	J-1
K	.15	.29	.21	.30	.30	.12	.10	.24	.21
C	.39	.23	.23	.21	.18	.12	.10	.17	.18
A	.16	.59	.60	.60	.07	.12	.10	-.10	.05
T	.56	.39	.19	.21	.22	.12	.10	.03	.03
N	.33	.35	.39	.21	.02	.12	.10	-.02	.10
R	.16	.05	.19	.20	.11	.12	.10	.11	.16
L	.33	.24	.13	-.04	.27	.12	.10	.29	.27
V	.05	.22	.39	.39	-.10	.12	.10	.10	-.02
H	.51	.29	.21	.48	.21	.12	.10	.09	.11
E	.31	.06	-.52	-.27	.23	.12	.10	.26	-.08
G	.00	.11	.18	.10	.08	.12	.10	.20	.03
B	.38	.24	.15	.21	.31	.12	.10	-.03	.14
I	.54	.16	.46	-.20	.01	.12	.10	.03	.04
W	.47	.21	-.11	-.05	.12	.12	.10	.04	.05
D	.16	.13	.08	.12	.09	.12	.10	.22	-.03
F	-.18	.48	.21	.03	.18	.12	.10	.08	-.12
S	-.06	-.02	-.05	.33	-.10	.12	.10	-.01	.11
M	-.04	-.02	.03	-.34	-.04	.12	.10	.01	-.18
P	.03	-.17	.05	-.12	.10	.12	.10	-.01	.12
Avg. z	.21	.20	.16	.13	.12	.12	.10	.09	.06
Avg. r	.21	.20	.16	.13	.12	.12	.10	.09	.06
Totals	4.05	3.83	3.02	2.47	2.28	2.24	1.90	1.70	1.17

APPENDIX VIII

Z SCORES OF THIRTY-SIX INTERCORRELATIONS

	28	29	30	31	32	33	34	35	36
	S-1	S-2	S-1	S-1	S-1	S-2	S-2	S-2	S-2
	J-4	J-6	J-3	J-6	J-5	J-1	J-5	J-4	J-3
K	.19	.33	.26	.44	.16	.17	.07	.07	.21
C	-.01	.08	.08	.09	.01	.17	-.06	-.06	.04
A	.08	-.14	.01	.05	.08	-.14	-.13	-.13	-.21
T	.07	.00	.05	.04	.02	-.20	.01	-.06	-.12
N	.19	-.01	.03	-.11	.30	-.08	.12	-.02	-.03
R	.07	.03	.05	.06	.03	-.01	-.13	-.12	-.11
L	.03	.30	.16	.22	.09	-.08	.06	.00	.12
V	.07	.06	-.12	-.02	-.01	.06	-.10	.22	-.16
H	.07	.27	.03	.03	.09	.04	.00	-.15	-.07
E	.10	.00	.14	-.12	.10	-.03	-.01	-.01	.04
G	-.11	.10	-.12	-.09	-.11	.07	-.15	-.09	-.02
B	.10	-.11	.13	.11	.01	-.08	-.20	-.18	-.27
I	.08	-.11	-.01	-.05	-.03	.03	-.20	-.09	-.19
W	.03	.08	.02	.17	-.06	-.06	-.08	-.18	-.19
D	-.13	.20	.09	.13	-.22	-.05	-.18	-.22	-.23
F	.07	.03	-.02	-.21	.04	-.07	.03	.07	-.11
S	-.02	-.27	-.04	-.09	.04	.11	-.05	-.15	-.16
M	-.04	.03	-.04	.08	-.17	.04	-.10	-.18	-.22
P	.03	-.04	.08	.01	-.06	.16	-.32	-.15	-.10
Avg. z	.05	.04	.04	.04	.02	.00	-.01	-.01	-.01
Avg. r	.05	.04	.04	.04	.02	.00	-.01	-.01	-.01
Totals	.87	.83	.78	.74	.31	.06	-1.42	-1.43	-1.78

APPENDIX IX

STATISTICAL NOTES

1. In this experiment the participants sorted into forced distribution. Consequently, the mean and standard deviation were identical for all participants and all sorts. Simplification of the usual r formula yielded the following, which was used in the computation:

$$r = 1 - \frac{\sum (x - y)^2}{2(\sum x^2 - \frac{(\sum x)^2}{N})}$$

2. The usual formulas were needed for rho and multiple r , respectively:

$$\rho = 1 - \frac{6 \sum D^2}{N(N^2 - 1)}$$

$$r_{12.3} = \frac{r_{12} - r_{13} r_{23}}{\sqrt{1 - (r_{13})^2} \sqrt{1 - (r_{23})^2}}$$

3. The significance figures were taken from Walker and Lev (201). For $(N-1)$ or eighteen degrees of freedom rho must be .564 or .399 to be significant at the .01 or .05 levels of confidence, respectively.

According to the table in Edwards (59, p. 331), for an N of seventy, r must be .30 or .23 to be significant at the .01 or .05 levels of

confidence, respectively.

4. The Freeman test presented by Siegel (171, p. 166-173) is to be used to study the same group of subjects under several different conditions. The formula follows:

$$X_r^2 = \frac{12}{Nk(k-1)} \sum_{j=1}^k (R_j)^2 - 3N(k-1)$$

In this formula;

N is the number of rows (subjects).

k is the number of columns, (conditions).

R_j is the rank totals in j^{th} (each) column.

$$\sum_{j=1}^k$$

directs one to sum the squares of the sum of ranks over all k conditions.

X_r

is compared with the usual chi square tables.

In brief, the rows are ranked across from high score to low score (or correlation) and the ranks are then summed for each column. These column sums are then squared, as in the formula.

5. Friedenberg and Roth (77, p. 17-18) describe the construction of the "average" or "typical" sort;

To facilitate the detection of the characteristics which might distinguish each group, a "typical" card-sort was prepared by ranking the cards according to the median placement of each in the numbered piles of the Q sort by the 49 persons cooperating. Thus the card with the lowest median placement was arbitrarily assigned to the first pile, the card with the next lowest median placement was arbitrarily assigned to the second, and so on until the card with the highest median placement was assigned to pile 9. Two values were thus obtained for each card--its actual median placement and a single digit whole number representing its typical pile placement.

In setting up the (J-5) average sort the single-digit whole number representing its typical pile placement was used.

6. From L. L. McQuitty, "Elementary Linkage Analysis for Isolating Orthogonal and Oblique Types and Typal Relevancies" the following synopsis is taken.

Linkage analysis is a statistical technique designed to yield information comparable to the Q technique of factor analysis, but results are obtained with greater rapidity. Persons are grouped in types or clusters. The procedure in brief follows.

1. Arrange the correlations between the persons in the usual matrix.
2. Underline the highest entry in each column of the matrix.
3. Select the highest entry in the matrix. This correlation obviously mediates between two persons. Record these individuals. They constitute the first two persons of the first type.
4. Select all those persons like these two members. This is done by reading across the rows in which the correlations of these two persons appear and selecting the underlined entries in these rows. Persons of the columns thus selected are most like the first two. These persons are first cousins and are included in Type I.
5. When there are no more individuals correlationally associated with this group, proceed to the next highest entry in the matrix and set up Type II in a similar way.
6. Proceed until all individuals are grouped.

BIBLIOGRAPHY

1. Adams, D. K. The inference of mind. Psychol. Rev., 1928, 35, 235-252.
2. Adams, H. F. The good judge of personality. J. abnorm. soc. Psychol., 1927, 22, 172-181.
3. Adler, G. Notes regarding the dynamics of the self. Brit. J. Med. Psychol., 1951, 24, 97-106.
4. Adorno, T. W., Frankel-Brunswick, Else, Levinson, D. J., & Sanford, R. N. The authoritarian personality. New York: Harper, 1950.
5. Allport, F. H. Social psychology. Cambridge: Riverside Press, 1924.
6. Allport, F. H. Theories of perception and the concept of structure. New York: Wiley, 1955.
7. Allport, F. H. & Allport, G. W. Personality traits: their classification and measurement. J. abnorm. soc. Psychol., 1921, 16, 6-40.
8. Allport, G. W. Personality: a psychological interpretation. New York: Henry Holt, 1937.
9. Allport, G. W. The ego in contemporary psychology. Psychol. Rev., 1943, 50, 451-576.
10. Allport, G. W. The productive paradoxes of William James. Psychol. Rev., 1950, 57, 95-120.
11. Amatora, Mary. Comparisons in personality self-evaluation. J. soc. Psychol., 1955, 42, 315-321.
12. Aristotle, On the Soul, trans. by J. A. Smith, Vol. 8 of Great Books of the Western World, ed. R. M. Hutchins, 54 vols., Chicago, Encyclopedia Britannica, 1952.
13. Asch, S. E. Social psychology. New York: Prentice-Hall, 1952.
14. Bauer, H. Über charakterologische Selbstbeurteilung. Wien. Z. Phil. Psychol. Pädag., 1950, 3, 60-71. (Psychol. Abstr., 26, 1132)

15. Beebe-Center, J. G. The psychology of pleasantness and unpleasantness. New York: Van Nostrand, 1932.
16. Bender, I. E. A study in integrations of personalities by prediction and matching. Unpublished doctoral dissertation, Univ. of Syracuse, 1935.
17. Bender, I. E. & Hastorf, A. H. The perception of persons: forecasting another person's responses on 3 personality scales. J. abnorm. soc. Psychol., 1950, 45, 556-561.
18. Bender, I. E. & Hastorf, A. H. On measuring generalized empathetic ability (social sensitivity), J. abnorm. soc. Psychol., 1953, 48,
19. Berger, E. M. The relation between expressed acceptance of self and expressed acceptance of others. J. abnorm. soc. Psychol., 1952, 47, 778-782.
20. Berkeley, G. The Principle of Human Knowledge, Vol. 35 of Great Books of Western World, ed. R. M. Hutchins, 54 vols., Chicago: Encyclopedia Britannica, 1952.
21. Bertocci, P. A. The psychological self, the ego, and personality. Psychol. Rev., 1945, 52, 91-99.
22. Bieri, J. Changes in interpersonal perceptions following social interactions. J. abnorm. soc. Psychol., 1953, 48, 61-66.
23. Bills, R. A., Vance, E. L., & McLean, O. S. An index of adjustment and values. J. consult. Psychol., 1951, 15, 257-261.
24. Bordin, E. S. Factor analysis in experimental design in clinical and social psychology. Psychol. Rev., 1943, 50, 415-429.
25. Bovard, Jr., E. W. Conformity to social norms in stable and temporary groups. Science, 1953, 117, 361-363.
26. Bower, E. M. & Tashnovian, P. J. Q methodology: an application in investigating changes in the self and self ideal in a mental health workshop. Calif. J. educ. Res., 1955, 6, 200-205.
27. Bowman, H. A study of the consistency of arrest, wish, proper self concepts as a measure of therapeutic progress. Unpublished doctoral dissertation, Univ. of Chicago, 1951.
28. Britt, S. J. Social psychology of modern life. (2nd ed.) New York: Rinehart, 1949.

29. Bronfenbrenner, U. The study of identification through interpersonal perception. In R. Tagiuri & L. Petrullo (Eds.), Person perception and interpersonal behavior. Stanford Univ. Press, 1958.
30. Bronfenbrenner, U. & Dempsey, P. F. Person and relationship as determinants of social sensitivity. Unpublished manuscript, 1953.
31. Brownfain, J. J. Stability of the self-concept as a dimension of personality. J. abnorm. soc. Psychol., 1952, 47, 597-606.
32. Bruner, J. S. & Tagiuri, R. The perception of people. In G. Lindzey (Ed.), Handbook of social psychology. Cambridge: Addison-Wesley, 1954. 634-654.
33. Bruner, J. S., Shapiro, D., & Tagiuri, R. The meaning of traits in isolation and in combination. In R. Tagiuri & L. Petrullo (Eds.), Person perception and interpersonal behavior, 1958.
34. Burt, C. Correlations between persons. Brit. J. Psychol., 1937, 28, 59-96.
35. Burt, H. D. Factors of the mind. London: Univ. of London Press, 1940.
36. Buzby, D. E. The interpretation of facial expression. Amer. J. Psychol., 1924, 35, 602-604.
37. Calvin, A. D. & Holtzman, H. Adjustment and the discrepancy between self concept and the inferred self. J. consult. Psychol., 1953, 17, 39-44.
38. Cantor, R. R. An experimental study of a human relations training program. Unpublished doctoral dissertation. The Ohio State Univ. Press, 1949.
39. Cattell, R. B. The description of personality: I. Foundations of trait measurement, Psychol. Rev., 1943, 50, 559-592.
40. Chein, I. The awareness of self and the structure of the ego. Psychol. Rev., 1944, 51, 304-314.
41. Chodorkoff, B. Self perception, perceptual defense and adjustment. J. abnorm. soc. Psychol., 1954, 49, 508-512.
42. Chowdry, Kamla & Newcomb, T. M. The relative abilities of leaders and non-leaders to estimate opinions of their own groups. J. abnorm. soc. Psychol., 1952, 47, 51-57.
43. Cline, V. B. Ability to judge others assessed with a stress interview and sound-film technique. J. abnorm. soc. Psychol., 1955, 50, 183-187.

44. Cogan, L. G., Conklin, R. M., & Hollingworth, E. L. An experimental study of self-analysis, estimates of associates and the result of tests. Sch. & Soc., 1915, 2, 171-179.
45. Coleman, J. C. Facial expressions of emotion. Psychol. Monogr., 1949, 63, No. 1 (Whole No. 296).
46. Cronbach, L. J. Correlation between persons as a research tool. In O. H. Mowrer (Ed.), Psychotherapy: theory and research. New York: Ronald, 1953, 376-388.
47. Cronbach, L. J. Processes affecting score on 'Understanding of Others' and 'Assumed similarity.' Psychol. Bull., 1955, 52, 177-193.
48. Cronbach, L. J. Proposals leading to analytic treatment of social perception scores. In R. Tagiuri & L. Petrullo (Eds.), Person perception and interpersonal behavior. Stanford Univ. Press, 1958.
49. Cronbach, L. J. & Gleser, Goldine C. Assessing similarity between profiles. Psychol. Bull., 1953, 456-474.
50. Davies, M. The general factor in correlation between persons. Brit. J. Psychol., 1939, 29, 404-421.
51. Davits, J. R. Social perception and sociometric choice of children. J. abnorm. soc. Psychol., 1955, 50, 173-176.
52. Deri, Suzan. Introduction to the Szondi Test. New York: Grune and Stratton, 1949.
53. Descartes, R. Regulae ad directionem ingenii, ed. C. Adams & P. Tannery, Paris: Leopold Cerf, 1908.
54. Dixon, W. J. & Massey, Jr., R. J. Introduction to statistical analysis. New York: McGraw Hill, 1951.
55. Dymond, Rosalind F. A scale for the measurement of empathic ability. J. consult. Psychol., 1950, 14, 343-350.
56. Dymond, Rosalind R. A preliminary investigation of the relationship of insight and empathy. J. consult. Psychol., 1948, 12, 228-233.
57. Dymond, Rosalind F., Hughes, Anne S., & Raabe, Virginia L. Measurable changes in empathy with age. J. consult. Psychol., 1952, 16, 202-206.
58. Edelson, M. & Jones, A. E. Operational exploration of the conceptual self system and the interaction between frames of reference. Genet.

Psychol. Monogr., 1954, 50, 43-139.

59. Edwards, A. L. Statistical analysis for students in psychology and education. New York: Rinehart, 1946.
60. Edwards, A. L. The relationship between the judged desirability of a trait and the probability that the trait will be endorsed. J. appl. Psychol., 1953, 37, 90-93.
61. Edwards, A. L. & Horst, P. Social desirability as a variable in Q technique studies. Educ. psychol. Measmt., 1953, 13, 620-626.
62. Epstein, S. Unconscious self-evaluation in a normal and schizophrenic group. J. abnorm. soc. Psychol., 1955, 50, 65-70.
63. Estes, S. G. Judging personality from expressive behavior. J. abnorm. soc. Psychol., 1938, 33, 217-236.
64. Fensterheim, H. & Tresselt, M. E. The influence of value systems on the perception of peoples. J. abnorm. soc. Psychol., 1953, 48, 93-98.
65. Ferguson, L. W. The value of acquaintance ratings in criteria research. Personnel Psychol., 1949, 2, 93-102.
66. Fernberger, S. W. False suggestion and the Piderit-model. Amer. J. Psychol., 1928, 40, 582-588.
67. Fiedler, F. E. Assumed similarity measures as predictors of team effectiveness in surveying. Bureau of Research and Service, Univ. of Illinois, Tech. Rep. No. 6, 1953.
68. Fiedler, F. E. The psychological-distance dimension in interpersonal relations. J. Pers., 1953, 22, 142, 150.
69. Fiedler, F. E. Leader attitude and group effectiveness. Urbana, Ill.: Univ. of Illinois Press, 1958.
70. Fiedler, F. E., Hartman, W., & Rudin, S. Correction and extension of the relationship of interpersonal perception to effectiveness in basketball teams. Bureau of Research and Service, Univ. of Illinois, Suppl. Tech. Rep. No. 3, 1953.
71. Fiedler, F. & Senior, Kate. An exploratory study of unconscious feelings in fifteen patient-therapist pairs. J. abnorm. soc. Psychol., 1952, 47, 446-453.

72. Fiedler, F. E., Warrington, W. G., and Blaisdell, F. J. Unconscious attitudes as correlates of sociometric choice in a social group. J. abnorm. soc. Psychol., 1952, 47, 790-796.
73. Fields, S. J. Discrimination of facial expression and its relation to personal adjustment. J. soc. Psychol., 1953, 38, 63-71.
74. Flyer, E. S., Barron, E., & Bigbee, L. Discrepancies between self-descriptions and group ratings as measures of lack of insight. USAF Hum. Res. Bull., 1953, 53-73, iii.
75. Frenkel-Brunswik, Else. Motivation and behavior. Genet. Psychol. Monogr., 1952, 66, No. 18 (Whole No. 35).
76. Freud, S. F. Group psychology and analysis of the ego, trans. by James Stachey. Vol. 54 of Great Books of Western World, ed. R. M. Hutchins, 54 vols., Chicago; Encyclopedia Britannica, 1952.
77. Friedenberg, E. Z. & Roth, J. E. Self perception in the university: a study of successful and unsuccessful graduate students. Univ. of Chicago Press, Suppl. Educ. Monogr., 1953, No. 80.
78. Friedman, Ira. Phenomenal, ideal, and projected conceptions of self. J. abnorm. soc. Psychol., 1955, 51, 611-615.
79. Frondizi, R. The nature of the self: a functional interpretation. New Haven: Yale, 1953.
80. Gage, N. L. Explorations in the understanding of others. Stud. higher Educ., Purdue Univ., 1951, No. 79, 86-96.
81. Gage, N. L. Judging interests from expressive behavior. Psychol. Monogr., 1952, 66, No. 18 (Whole No. 35).
82. Gage, N. L. Accuracy of social perception and effectiveness in interpersonal relations. J. Pers., 1953, 22, 128-141.
83. Gage, N. L. Explorations in the understanding of others. Educ. psychol. Measmt., 1953, 13, 14-26.
84. Gage, N. L. Some conceptual and methodological problems in research on "empathy." Paper read at Amer. Psychol. Assoc., Cleveland, September, 1953.
85. Gage, N. L. Studies of the generality and behavioral correlates of social perception. Bur. of Educ. Res., Coll. of Educ., Univ. of Ill., 1953.

86. Gage, N. L. & Cronbach, L. J. Conceptual and methodological problems in interpersonal perception. Psychol. Rev., 1955, 62, 411-422.
87. Gage, N. L. & Exline, R. V. Social perception and effectiveness in discussion groups. Hum. Relat., 1953, 6, 381-396.
88. Gage, N. L., Leavitt, G. S., & Stone, G. C. The concept of the intermediary key in the analysis of interpersonal perception. Bur. of Educ. Res., Coll. of Educ., Univ. of Illinois, Rep. No. 2, August 1954.
89. Gage, N. L., Leavitt, G. S., & Stone, G. C. An analysis of the negative correlation between two kinds of accuracy in predicting another's responses. Bur. of Educ. Res., Coll. of Educ., Univ. of Illinois, Rep. No. 3, December 1954.
90. Gage, N. L., Leavitt, G. S., & Stone, G. C. Generality of accuracy in perceiving standard persons. Bur. of Educ. Res., Coll. of Educ., Univ. of Illinois, Rep. No. 1, August 1954.
91. Gage, N. L., Leavitt, G. S., & Stone, G. C. Social perception in the classroom. Bur. of Educ. Res., Coll. of Educ., Univ. of Illinois, Rep. No. 5, January 1955.
92. Gage, N. L., Leavitt, G. S., & Stone, G. S. Teachers' understanding of their pupils and pupils' ratings of their teachers. Psychol. Monogr., 1955, 69, No. 21, 1-37.
93. Gage, N. L., Leavitt, G. S., & Stone, G. C. The intermediary key in the analysis of interpersonal perception. Psychol. Bull., 53, 1956, 258-266.
94. Gates, G. S. An experimental study of the growth of social perception. J. educ. Psychol., 1923, 14, 449-462.
95. Gordon, T. & Cartwright, D. The effect of psychotherapy upon certain attitudes toward others. In C. R. Rogers & Rosalind F. Dymond (Eds.), Psychotherapy and personality change; co-ordinated studies in the client-centered approach. Chicago: Univ. of Chicago Press, 1954, pp. 167-195.
96. Green, G. H. Insight and group adjustment. J. abnorm. soc. Psychol., 1948, 43, 49-61.
97. Grace, H. A. The self and self-acceptance. Educ. Theory, 1953, 3, 220-223; 271.

98. Guilford, J. P. An experiment in learning to read facial expression. J. abnorm. soc. Psychol., 1929, 24, 191-202.
99. Hall, C. S., & Lindsey, G. Theories of personality. New York: Wiley, 1957.
100. Hanks, Jr., L. M. Prediction from case material to personality data. Arch. Psychol., N. Y., 1936, 29, No. 207.
101. Halpern, H. M. Empathy, similarity, and self-satisfaction. J. consult. Psychol., 1955, 19, 449-452.
102. Hanlon, T. E., Hofstaetter, P. R., & O'Connor, J. P. Congruence of self and ideal self in relation to personality adjustment. J. consult. Psychol., 1954, 18, 215-218.
103. Hartland-Swann, J. An analysis of knowing. London: George Allen & Unwin, 1958.
104. Harvey, O. J. & Sheriff, M. Level of aspiration as a case of judgmental action in which ego-involvements operate as factors. Sociometry, 1951, 14, 141-147.
105. Heftel, H. H. A study of the accuracy of perception in interpersonal relationships. Unpublished M. A. thesis. Univ. of Chicago, August, 1951.
106. Hilgard, E. R. Human motives and the concept of self. Amer. Psychologist, 1949, 4, 378-82.
107. Hollingworth, H. L. The psychology of thought. New York: MacMillan, 1926.
108. Holt, R. R. The accuracy of self-evaluation; its measurement and some of its psychological correlates. J. consult. Psychol., 1951, 15, 95-101.
109. Houston, G. C. Toward better self-understanding. Personnel J., 1956, 34, 286-291.
110. Ichheiser, G. Misunderstandings in human relations: A study in false social perception. Amer. J. Sociol., 1949, 55, No. 2, Part 2.
111. James, William. Principles of Psychology. Vol. I. Dover, Md.: Dover Publications, 1950.
112. Jenness, A. The recognition of facial expressions of emotions. Psychol. Bull., 1932, 29, 324-350.

113. Jones, E. The life and work of Sigmund Freud. New York: Basic Books, Vol. 1, 1953.
114. Jones, E. E. The role of authoritarianism in the perception and evaluation of prospective leaders. Unpublished doctoral dissertation. Harvard Univ., 1953.
115. Jung, C. G. The undiscovered self. Translated from the German by R. F. C. Hull, Boston: Little Brown, 1957.
116. Kanner, L. Judging emotions from facial expressions. Psychol. Monogr. 1931, 41, No. 3 (Whole No. 185).
117. Kelley, H. H. First impressions in interpersonal relations. Unpublished doctoral dissertation, Mass. Inst. of Tech., 1948.
118. Kellogg, N. W. & Eagleson, B. M. The growth of social perception in different racial groups. J. educ. Psychol., 1931, 22, 367-375.
119. Kelly, E. L. & Fiske, D. W. The prediction of performance in clinical psychology. Ann Arbor: Univ. of Michigan Press, 1951.
120. Kelly, E. L., Miles, C. C., & Terman, L. Ability to influence one's score on a typical pencil and paper test of personality. Charact. & Pers., 1936, 4, 206-215.
121. Kilpatrick, F. P. Assumptions and perception: three experiments. In Kilpatrick, F. P. Human behavior from the transactional point of view. Hanover, N. H.: Institute for Association Research, 1952, 153-173.
122. Knight, F. B. The effect of the "acquaintance factor" upon personal judgments. J. educ. Psychol., 1923, 14, 129-142.
123. Lewin, K. Frontiers in group dynamics: I. Concept, method and reality in social science; social equilibria and social change. Hum. Relat., 1947, 1, 5-41.
- 123a. Lewin, K. Frontiers in group dynamics: II. Channels of group life; social planning and social research. Hum. Relat., 1947, 1, 143-153.
124. Lindgren, H. C. & Robinson, Jacqueline. The evaluation of Dymond's test of insight and empathy. J. consult. Psychol., 1953, 17, 172-176.
125. Lindzey, G. & Rogalsky, S. J. Prejudice and identification of minority group membership. J. abnorm. soc. Psychol., 1950, 45, 37-53.

126. Lipps, T. Leitfaden der Psychologie, 1903.
127. Locke, J. An essay concerning human understanding, Vol. 35 of Great Books of Western World, ed. R. M. Hutchins, 54 vols., Chicago: Encyclopedia Britannica, 1952.
128. Luft, J. Some relationships between clinical specialization and the understanding and prediction of an individual's behavior. Unpublished doctoral dissertation, Univ. of California, Los Angeles, 1949.
129. Luft, J. Implicit hypotheses and clinical predictions. J. abnorm. soc. Psychol., 1950, 45, 756-760.
130. Lundholm, H. Reflections upon the nature of the psychological self. Psychol. Rev., 1940, 47, 110-126.
131. Lundy, R. M., Katvosky, W., Cromwell, R. L., & Shoemaker, D. J. Self acceptibility and descriptions of sociometric choices, J. abnorm. soc. Psychol., 1955, 51, 260-262.
132. MacLeod, R. B. Perceptual consistency and the problem of motivation. Canad. J. Psychol., 1949, 9, 57-66.
133. May, R. Religion, psychology, and the achievement of selfhood. Past. Psychol., 1951, 2(17), 29-33.
134. Mayo, B. The logic of personality. London: Jonathan Cade, 1952.
135. McClelland, W. A preliminary test of role-playing ability. J. abnorm. soc. Psychol., 1950, 45, 102-108.
136. McIntyre, C. Acceptance by others and its relation to acceptance of self and others. J. abnorm. soc. Psychol., 1952, 47, 624-625.
137. McNemar, Q. Psychological statistics. New York: Wiley, 1949.
138. McQuitty, L. L. Elementary linkage analysis for isolating orthogonal and oblique types and typal relevancies. Unpublished paper, July 27, 1956.
139. Mead, G. H. The philosophy of the present. Chicago: Open Court, 1932.
140. Mead, F. H. Mind, self, and society. Chicago: Univ. of Chicago Press, 1934.
141. Moreno, J. L. & Moreno, Florence B. Role tests and diagrams of children. In J. L. Moreno (Ed.), Group psychotherapy. New York: Beacon House, 1945, 188-203.

142. Morsh, J. E. The Q-sort technique as a group measure. Educ. psychol. Measmt., 1955, 15, 390-396.
143. Mowrer, O. H. Q technique--description, history, and critique. In O. H. Mowrer (Ed.), Psychotherapy: theory and research. New York: Ronald, 1953, 318-375.
144. Murphy, G. Personality: a biosocial approach to origins and structure. New York: Harper, 1947.
145. Murray, H. A. The effect of fear upon estimates of the maliciousness of other personalities. J. soc. Psychol., 1933, 4, 310-329.
146. Murray, H. A. Explorations in personality. New York: Oxford Univ. Press, 1938.
147. Norman, R. D. The interrelationships among acceptance-rejection, self-other identity, insight into self, and realistic perception of others. J. soc. Psychol., 1953, 37, 205-235.
148. Rotcutt, B. & Silva, A. L. M. Knowledge of other people. J. abnorm. soc. Psychol., 1951, 46, 30-37.
149. Munnally, J. C. Investigation of some propositions of self conception: the case of Miss Sun. J. abnorm. soc. Psychol., 1955, 50, 87-92.
150. Omwake, Katherine T. The relation between acceptance of self and acceptance of others as shown by three personality inventories. J. consult. Psychol., 1954, 18, 443-446.
151. Osgood, C. E. & Suci, G. J. A measure of relation determined by both mean difference and profile information. Psychol. Bull., 1952, 49, 251-262.
152. Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. The measurement of meaning. Urbana, Ill.: Univ. of Illinois Press, 1957.
153. OSS Assessment Staff. Assessment of men. New York: Rinehart, 1948.
154. Phillips, Jr., E. H. The development and evaluation of a measure of counseling interview procedures. Educ. psychol. Measmt., 1943, 3, 105-125.
155. Plato, Republic. Trans. and with an intro. by H. D. P. Lee, Baltimore: Penguin Books, 1955.
156. Polansky, N. A. How shall a life history be written. Charact. & Pers., 1941, 9, 188-207.

157. Rabin, A. I. Szondi's pictures: identification of diagnoses. J. abnorm. soc. Psychol., 1950, 45, 392-395.
158. Rimoldi, H. J. A. Ability to predict personal behavior. Research Memorandum, RM-53-14, Princeton: Educational Testing Service, 1953.
159. Rogers, C. R. Client-centered therapy. Boston: Houghton-Mifflin, 1951.
160. Rogers, C. R. & Dymond, Rosalind (Eds.), Psychotherapy and personality change. Chicago: Univ. of Chicago Press, 1954.
161. Rokeach, M. Studies in beauty. II. Some determiners of the perception of beauty in women. J. soc. Psychol., 1945, 22, 155-169.
- 161a. Runes, D. D. Dictionary of Philosophy. Ames, Iowa: Littlefield, Adams, 1955.
162. Sarbin, T. R. A preface to a psychological analysis of the self. Psychol. Rev., 1952, 59, 11-22.
163. Schiff, H. Judgmental response sets in the perception of sociometric status. Sociometry, 1954, 17, 207-227.
164. Schneiderman, L. Social perception as a function of identification. J. Psychol., 1954, 37, 155-162.
165. Soodell, A. & Mussen, P. Social perceptions of authoritarians and non-authoritarians. J. abnorm. soc. Psychol., 1953, 43, 181-184.
166. Sears, R. R. Experimental studies of projection. I. Attribution of traits. J. soc. Psychol., 1936, 7, 151-163.
167. Seeman, J. A study of the process of non-directive therapy. J. consult. Psychol., 1949, 13, 157-168.
168. Sheerer, Elizabeth T. An analysis of the relationship between acceptance of and respect for self and acceptance of and respect for others in the counseling cases. J. consult. Psychol., 1949, 13, 169-175.
169. Shen, E. The influence of friendship upon personal ratings. J. appl. Psychol., 1925, 19, 66-68.
170. Sheriff, G. & Cantril, H. The psychology of ego-involvement. New York: Wiley, 1947.
171. Siegel, S. Nonparametric statistics for the behavioral sciences. New York: McGraw Hill, 1956.

172. Smith, G. H. Personality scores and the personal distance effect. J. soc. Psychol., 1954, 39, 57-62.
173. Smith, M. B. The phenomenological approach in personality: some critical remarks. J. abnorm. soc. Psychol., 1950, 45, 516-522.
174. Smith, P. A. A factor analytical study of the self-concept. Paper read at Midwest Psychol. Assoc., Detroit, May, 1958.
175. Soskin, W. F. Bias in prediction from projective tests. J. abnorm. soc. Psychol., 1954, 49, 69-74.
176. Soskin, W. F. Frames of reference in personality assessment. J. clin. Psychol., 1954, 10, 107-114.
177. Speroff, B. J. Empathic ability and accident rate among steel workers. Personnel Psychol., 1953, 6, 297-300.
178. Stagner, R. The psychological aspects of industrial conflict. I. Perception. Personnel Psychol., 1948, 1, 131-143.
179. Stern, G. G., Stein, M. I., & Bloom, B. S. Methods in personality assessment. Glencoe, Illinois: Free Press, 1956.
180. Stephenson, W. The inverted factor technique. Brit. J. Psychol., 1936, 26, 344-361.
181. Stephenson, W. Some recent contributions to the theory of psychometry. Char. & Pers., 1936, 4, 294-304.
182. Stephenson, W. The study of behavior. Chicago: Univ. of Chicago Press, 1953.
183. Stock, Dorothy. An investigation into the interrelations between self-concept and feelings directed toward other persons and groups. J. consult. Psychol., 1949, 13, 176-180.
184. Strodtbeck, F. L. On the analysis of the data derived from Bronfenbrenner's study of social sensitivity, Working Paper #19, part of project: Cultural factors in talent development, February 15, 1953, 1-14.
185. Sweet, L. The measurement of personal attitudes in younger boys. New York: Association Press, 1929.
186. Taft, R. Some correlates of the ability to make accurate social judgments. Unpublished doctoral dissertation, Univ. of California, 1950.

187. Taft, R. The ability to judge people. Psychol. Bull., 1955, 52, 1-23.
188. Tagiuri, R. Introduction. In R. Tagiuri & L. Petrullo (Eds.), Personal perception and interpersonal behavior. Stanford: Stanford Univ. Press, 1958.
189. Tarwater, J. W. Self-understanding and the ability to predict another's response. Marriage Fam. Living, 1953, 15, 126-128.
190. Taylor, C. & Combs, A. W. Self-acceptance and adjustment. J. consult. Psychol., 1952, 16, 89-91.
192. Thomas Aquinas, Saint, Summa Theologiae, cura et studio Institutii Studiorum Medieualium Ottaviensis, Vol. I, Ottawa, 1941-1945.
193. Thompson, W. & Nishimura, R. Some determinants of friendship. Amer. Psychologist, 1950, 5, 309-310.
194. Tippet, L. H. C. Methods of statistics. London: Williams and Morgate, 1937.
195. Travers, R. M. W. A study of the ability to judge group-knowledge. Amer. J. Psychol., 1943, 56, 54-65.
196. Travers, R. M. W. A study in judging the opinions of groups. Arch. Psychol., N. Y., 1951, No. 266, 1-73.
197. Tyron, R. C. Identification of social areas by cluster analysis. Univ. of California Publications in Psychology, 1955, Vol. 8, No. 1.
198. Valentine, C. W. The relative reliability of men and women in intuitive judgments of character. Brit. J. Psychol., 1929, 19, 213-238.
199. Van Zelsø, R. H. Empathy test scores of union leaders. J. apply. Psychol., 1952, 36, 293-295.
200. Vernon, P. E. Some characteristics of the good judge of personality. J. soc. Psychol., 1933, 4, 42-57.
- 200a. Verplanck, W. S. A glossary of some terms used in the objective science of behavior. Psychol. Rev., 1957, Vol. 74, No. 6, Pt. 2.
201. Walker, Helen Mary and Lev, J. Statistical inference. New York: Henry Holt, 1953.
202. Wallin, P. The prediction of individual behavior from case studies. Soc. Sci. Res. Council Bull., 1941, 48, 18-25.

203. Walton, W. E. Empathic responses in children. Psychol. Monogr., 1936, 48, No. 1 (Whole No. 213), 40-67.
204. Warrington, W. G. the efficiency of the Q sort and other designs for measuring the similarity between persons. Unpublished doctoral dissertation, Univ. of Illinois, 1952.
205. Watson, D. L. On the role of insight in the study of mankind. Psychol. Rev., 1938, 25, 358-371.
206. Webb, E. Character and intelligence. Brit. J. Psychol. Monogr., 1915, 1, No. 3.
207. Webb, W. B. Self-evaluation compared with group evaluation. J. consult. Psychol., 1952, 16, 305-307.
208. Wedeck, J. The relationship between personality and "psychological ability." Brit. J. Psychol., 1946, 37, 133-151.
209. Wedell, C. & Smith, K. U. Consistency of interview methods in appraisal of attitudes. J. appl. Psychol., 1951, 35, 392-396.
210. Weingarten, Erica M. A study of selective perception in clinical judgment. J. Pers., 1949, 17, 396-406.
211. Whiting, J. F. Q sort: a technique for evaluating perceptions of interpersonal relationships. Nurs. Res., 1955, 4, 70-74.
212. Williams, S. N. & Leavitt, H. J. Group opinion as a prediction of military leadership. J. consult. Psychol., 1947, 11, 283-291.
213. Wittich, J. J. The generality of the prediction of self reports. J. consult. Psychol., 1955, 19, 445-448.
214. Woelfl, D. Factor analysis to 1940. Psychometric Monogr., 1940, No. 3, Univ. of Chicago Press.
215. Wundt, W. Logic, 1895.

APPROVAL SHEET

The dissertation submitted by Henry J. Lambin
has been read and approved by five members of the
Department of Psychology.

The final copies have been examined by the
director of the dissertation and the signature which
appears below verifies the fact that any necessary changes
have been incorporated, and that the dissertation is now
given final approval with reference to content, form, and
mechanical accuracy.

The dissertation is therefore accepted in partial
fulfillment of the requirements for the Degree of Doctor
of Philosophy.

Feb 20 1959
DATE


SIGNATURE OF ADVISER